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日本外科宝函編集室
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（振替口座 京都 4-3691）
The Mechanism of Formation of Bilirubin Calcium Stones and Black Stones
YORINORI HIKASA, ARIMICHI TAKABAYASHI, TOMONOBU SATO
Tazuke Kohfukai Medical Institute, Kitano Hospital (Director: YORINORI HIKASA)
HIROSHI TAKAHASHI, TSUKASA SEKIYA, KEISUKE MARUYAMA, NOBUAKI KOBAYASHI, HIROSHI TANIMURA
Second Department of Surgery, Faculty of Medicine, Kyoto University (Director: Prof. Dr. KAZUE OZAWA)
ROGER D. SOLLOWAY
Hospital of the University of Pennsylvania, Philadelphia, USA

For our basic analysis of bile components we used high performance liquid chromatography which promptly and correctly separates and quantitatively analyses bilirubin without using thin layer chromatography with diazo-reaction. This is important because bilirubin is especially unstable in light and oxygen. We also found a method to determine the concentration of calcium ions in bile using a calcium ion analyser with an ion selective electrode. Our purpose in undertaking this research was to search for a better explanation for the formation of bilirubin calcium stones and black stones, as the conventional explanation failed to fully satisfy us.

The Studies on the Cerebral Blood Volume and Brain Metabolism in the Experimental Brain Ischemia
AKIRA Koyabashi
Department of Neurosurgery, Faculty of Medicine (Director: Prof. Dr. Hajime Handa)

To clarify the compensatory changes of cerebral blood volume (CBV) and oxygen metabolism in brain ischemia, CBV, oxygen extraction fraction (OEF) and cerebral metabolic rate for oxygen (CMRO2) were studied with the staged decrease of cerebral blood flow (CBF) in the whole brain ischemic model of the rat (modified Pulsinelli's model). By controlling the degree of stenosis in the bilateral common carotid arteries, cortical CBF was decreased into three controlled stages; first to about 60 ml/100 g/min for 2 hours, second to about 40 ml/100 g/min for 3 hours, and finally to about 25 ml/100 g/min for 2 hours, during one time course of 7 hours.

In the second CBF stage, "misery perfusion" state and "low perfusion hyperemia" were observed. This stage can be considered as compensatory stage of brain ischemia. In the third CBF stage, oxygen metabolism already fell into the impairment, and CBV was lower than the normal values.

A Clinical Study of Risk Factors Associated with Direct Interruption Surgery for Esophageal Varices; A Comparative Study between Transthoracoabdominal Transection with Hand-suture and Transabdominal Transection with EEA Stapler
TORU SHIMIZU
The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. KoiCHI ISHIgAMI)

From the clinical investigation on the risk factor of direct interruption surgery for esophageal varices with the method of multivariant discriminant analysis, ICG R(r%) emergent procedure and variance of operation were more closely related to the operative mortality than other preoperative variables. As compared with transthoracoabdominal esophageal transaction with hand-suture, transabdominal esophageal transaction with EEA stapler is more suitable operation for patients with poorer hepatic reserve.

A Study of Sensitivity of Esophageal Cancer to Anticancer Agents
NORIO MATSUMOTO
The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. Koichi Ishigami)

The sensitivities of 25 cases of esophageal cancer to anticancer agents were investigated by INAS (Inhibition of Nucleic Acid Synthesis) method. Ten cases out of 25 (40%) were sensitive to Bleomycin (BLM), 9 cases out of 25 (36%) to Cisplatin (CDDP), 9 cases out of 16 (56.8%) to 5-Fu. The sensitivities of the metastatic lymph nodes and peripheral portions of tumor to CDDP were higher. Original tumors of human esophageal cancer were transplanted into nude mice and 5 cases out of 10 (50%) were successfully transplanted primarily.

The sensitivities of corresponding xenographs in nude mice to BLM and CDDP had a tendency to be higher than those of the original tumors of esophageal cancer.
Studies on Some Problems Regarding the Cardiac Closing Mechanism

HIDEAKI NAGASAWA

The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. KOICHI ISHIGAMI)


The alteration of the cardiac closing mechanism after distal gastrectomy in human being and dogs, and the reconstruction of the cardiac closing mechanism by the Collis-Nissen method in dogs were investigated with open-tip method. In the Billroth-I gastrectomy cases, His angle increased and resting intraluminal pressure at the esophago gastric junction decreased, postoperatively. However, in the Billroth-II gastrectomy cases, no remarkable changes were observed in His angle and resting pressure, post-operatively. The Collis-Nissen operation is useful in reconstructing the cardiac closing mechanism and elongating the esophagus in sliding esophageal hiatal hernia cases with short esophagus.

Clinical Evaluation of Mitochondrial Creatine Kinase Level in Human Tumors

RYOICHI SHIMIZU

The 2nd Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. KOICHI ISHIGAMI)


Recently mitochondrial creatine kinase (CK) has been detected in patients with various malignant tumors, especially those with cancers of the gastrointestinal (GI) tract. In order to clarify its distribution in the GI tract, the author measured the mitochondrial CK activity in normal and malignant tissues of the alimentary tract by agarose gel electrophoresis using an antibody against the M monomer. The result of this study showed that mitochondrial CK was the predominant isoenzyme in malignant tissue, especially in gastric and colorectal cancers. It seems that mitochondrial CK is the tumor associated marker of the GI tract.

Effect of VIP on the Cardiac Closing Mechanism and Pathophysiology of Achalasia of the Esophagus

AKIRA TANAKA

The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. KOICHI ISHIGAMI)


The effect of vasoactive intestinal polypeptide on the lower esophageal sphincter was investigated by the manometric study. VIP reduced resting and tetragastrin-stimulated lower esophageal sphincter pressure with significantly greater potency than secretin. Phenol-injected achalasia dogs showed hypersensitive reduction of LESP in comparison with normal dogs. Patients with achalasia showed hypersensitive response to secretin. By the immunohistochemical studies, normal dogs and control patients had VIP-immunoreactive nerve cell bodies and fibers in myenteric plexus and muscle layer of LES. Achalasia dogs and achalasia patients had fewer VIP-reactive nerves.

Effect of the progression of fibrosis on microvascular structure and endocrine function is studied by the methods of microangiography, scanning electron microscope and intravenous glucose tolerance test in canine pancreas.

In fibrotic pancreas, the number of efferent vessels in the transitional zone of the islet of Langerhans to exocrine tissue are markedly diminished, but the fundamental microvascular structure of the islet of langerhans is well maintained even thirteen months after pancreatic duct ligation.

The endocrine function is disturbed in most cases of severely fibrotic pancreas.
Cancer Development in the Gastric Remnant, Especially the Effect of Bile Acids

KOHEI MISAKI

The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. KOICHI ISHIKAMI)


The gastric remnant carcinoma develops predominantly after Billroth II resection and in the stump or near the anastomotic site.

Autoradiographic findings showed that the expansion of the proliferative zone was observed in the gastric remnant, suggesting that the gastric remnant is a disorder of proliferation which may predispose to malignant transformation.

In Wistar rats, H-thymidine incorporation was significantly greater in the pyloric area than in the fundic area. Peroral administration of CA, DCA or MNNG didn't increase H-thymidine incorporation in the fundic area but increased in the pyloric area. The addition of CA or DCA to MNNG didn't increase H-thymidine incorporation.

An Experimental Study on Congenital Biliary Dilatation

YASUO NAKASHIMA

The 2nd Department of Surgery, Faculty of Medicine, Kyoto University (Director: prof. Dr. KAZUE OZAWA)


In order to elucidate the effect of the choledochal stenosis on congenital biliary dilatation, 123 rats were used and comparisons were made among 5 Groups (Group I: control, Group II: single ligation of the choledochus, Group III: short-term observation after ligation and dissection of the choledochus, Group IV: long-term observation after ligation and dissection of the choledochus, Group V: cyst-duodenostomy).

Cystic dilatation of the choledochus was not induced by single ligation. Cystic dilatation localized in the extrahepatic bile duct could be induced in rats by double ligation and dissection of the choledochus.

Cystic dilatation was more pronounced in rats weighing less than 100 g than in those weighing 100 g or more.

A Clinical Study on Congenital Biliary Dilatation Comparison of Cystic Type vs Cylindrical-Fusiform Type

YASUO NAKASHIMA and KISAKU SATOMURA

The 2nd Department of Surgery, Faculty of Medicine, Kyoto University (Director: Prof. Dr. KAZUE OZAWA)


Fourty-five cases (less than 15 years-old) of congenital biliary dilatation were divided into two types, namely cystic type and cylindrical-fusiform type, and comparison was made on clinical features as well as laboratory findings between two types.

Cystic type tended to occur in younger ages than cylindrical-fusiform type.

Chief complaints of the patients with cystic type were abdominal mass, jaundice and abdominal pain. In the cylindrical-fusiform type, those were abdominal pain, vomiting and fever.

Serum amylase values increased in 6 patients with cylindrical-fusiform type but no cases increased in the cystic type.
Effects of an Artificial Intestinal Valve on Massive Bowel Resection

TETSUJI HANAFUSA

The 2nd Department of Surgery, Faculty of Medicine, Kyoto University (Director: Prof. Dr. KAZUE OZAWA)


An experimental study was carried out in mongrel puppies to clarify the beneficial effect of an artificial intestinal valve on massive bowel resection.

The following results were obtained:
1) The 80% resection group showed good postoperative intestinal adaptation, while the 80% resection plus ileoceleal valve resection group showed poor adaptation.
2) Significant differences were found in weight, mortality, stool appearance and blood chemistry between the artificial intestinal valve fitting group and the ileoceleal resection group.
3) The artificial valve as well as the ileoceleal valve played an important role after massive bowel resection.

A Clinical Study on an Artificial Intestinal Valve

TETSUJI HANAFUSA and KISAKU SATOMURA

The 2nd Department of Surgery, Faculty of Medicine, Kyoto University (Director: Prof. Dr. KAZUE OZAWA)


Considering the result of an experimental study on the short bowel syndrome and on an artificial intestinal valve constructed by telescoping anastomosis, a clinical study was carried out on 14 cases in order to elucidate the effect of the valve.

The following results were observed:
1) The intestinal valve was found to be functional by 1~11 years follow-up studies.
2) By Ba enema examination, the artificial valve was found to be not a cicatricial stenosis but to have a functional valvular mechanism.
3) The effect of the valve was recognized as improvement of fecal condition and defecational control.

Studies on Hyperthermic Chemotherapy for Cancer of the Rectum: Especially the Intraluminal Administration with Perfusion of Adriamycin Containing Warmed Saline Solution

AKITOSHI KUDO

The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. KOICHI ISHIGAMI)


The author made a fundamental investigation on the hyperthermic chemotherapy for rectal cancer in dogs. Hyperthermia was attained by perfusion of warmed saline solution using two way catheter and adriamycin (ADM) was administered intraluminally at the dose of 10, 50 and 100 mg/1. ADM levels in colonic mucosa were increased in hyperthermic (43°C) group. The localization of ADM in the colon was demonstrated fluorescence-microscopically. Using INAS method, the effect of hyperthermia on the sensitivity of tumor cells to ADM was verified. Two clinical cases with rectal cancer had undergone this hyperthermic chemotherapy.

A Clinicopathological Study on Local Extension in Musculoskeletal Sarcoma

TAIHO SHIBATA

Department of Orthopedic Surgery, Ehime University School of Medicine

KIYOSHI KOMI

Department of Orthopedics, Kita-uwa Prefectural Hospital


To clarify the biological barrier effect on the local extension for musculoskeletal sarcomas, a clinicopathological study was carried out retrospectively and prospectively in 21 patients (24 operations) with skeletal sarcomas and also 11 patients (13 operations) with soft tissue sarcomas.

The results of these surgical procedures showed that the radical local control may be achieved by a carefully planned procedure within the limits of a wide margin, considering the minor barrier that may exist in a compartment.

The histological findings suggest that the epimysium, epiphyseal cartilage, aponeurosis, muscle fiber and the synovial layer act as a minor barrier against the local extension of sarcomas.
Stable Cementless Wrist Prosthesis (SCW prosthesis)
YASUO UEBA, NAOKI NISHIJIMA, TAKEO TSUJI, CHIAKI HAMANISHI and TAKAO YAMAMURO
The Orthopedic Department, Faculty of Medicine, Kyoto University

A new wrist prosthesis (SCW prosthesis) is an unconstrained wrist prosthesis which consists of two components. They are made of alumina ceramics and high density polyethylene. It is designed to provide good range of motion, especially full range of extension. A wide contact area of the articulation gives good stability. As the stem and pegs of the prosthesis are made of ceramics, they incorporate well to the bone without cementing. This prosthesis was clinically used in two wrists of two patients. Both patients are postoperatively satisfied with the stable painless wrists.

Principles of Treatment for Cancer of the Esophagus in Our Department
MASAYUKI IMAMURA,1) KEN OHISHI,1) YUTAKA SHIMADA,1) TAKAYOSHI TOBE,1) TOSHIYUKI ARAI,2) YOSHIRO HATANO,2) MASAHIRO HIRAOKA,2) MITSUYUKI ABE,2) RYOICHI INOUE,3) MOTOHIKO ITO,3) SHINICHI NAGAMINE4)
The 1st. Department of Surgery,1) Anesthesiology,2) Radiology,2) Geriatric Medicine,4) Institute for Chest Disease,5) Tokyo University, Wakayama Red Cross Hospital.*

Of 108 patients with carcinoma of the esophagus seen at our department between August 1975 and 1985, 76 (70.4%) underwent resection of the esophagus. This report is confined to 72 operations performed in the division of the senior author for intrathoracic esophageal cancer. The overall 5-year survival rate was 35%. The 5-year survival rate according to stage was 80% for patients with stage 0, 50% for stage 1, 45% for stage 2. Usefulness of High Frequency Jet Ventilation for ventilation during open-chest surgery and a new technique of retrosternal esophagogastrotomy with EEA stapler were described precisely.

Treatment of the Occlusive Cerebrovascular Disease with a Selective Thromboxane A2 Synthetase Inhibitor
SINICHIRO OKAMOTO1, YASUHiro YONEKAWA1, Hajime HANo,1 YUTAKA HANo1, YOSHIHiko UEMURA1, ICHIe YANO3, MASANoRI TOYOSHIMA3, KENICHIRO IWATSUJI3, TETSUAKI TERAUC3, SEN YAMAGATA1, TAKASHI SEKo2, HARUMI TSUDA2, GUCHIRO UKITA2, YASUNOri INOUE1, YUKO SHIMIZU2, and HARUYASU SAWAM2.
Department of Neurosurgery, Faculty of Medicine, Kyoto University1, Department of Neurosurgery2 and Internal Medicine3, Otowa Hospital, Department of Neurosurgery4 and Internal Medicine5, Kyoto Municipal Hospital, Department of Neurology, the second Kyoto Red Cross Hospital6, Department of Neurology, Rakuto Hospital7, Department of Neurosurgery, Shimizu Hospital8, and Department of Internal Medicine, Takeda Hospital9.

A selective inhibitor of the thromboxane A2 synthetase, OKY-046, was administered for over 3 months to 29 patients with occlusive cerebrovascular diseases including 10 TIAs and 4 RINDs. The frequency of the ischemic episodes of TIA or RIND reduced remarkably after the oral administration of OKY-046, 600 mg a day. Of these, 2 patients experienced cerebral infarction during the study. The drug tended to reduce the ex vivo platelet aggregability induced by either arachidonic acid or collagen, but not by ADP or epinephrine. There was only one patient with adverse effect who complained of mild epigastralgia.
Experimental Study on the Prevention of Vasospasm Following Subarachnoid Hemorrhage by a Thromboxane A₂ Synthetase Inhibitor, OKY-046

SHIGEAKI OHSHU
Division of Neurosurgery, Brain Research Institute, Niigata University (Director: Prof. Dr. RYUICHI TANAKA)


The prevention of vasospasm by an inhibitor of thromboxane A₂ synthetase OXY/046 was studied in the experimental subarachnoid hemorrhage of dogs.

The degree of the vasospasm 3 days after SAH in the treatment group was remarkably decreased. Thromboxane B₂ in the plasma of the jugular vein increased markedly in the control group, whereas it was remarkably inhibited in the treatment group. Local cerebral blood flow in the control group decreased after SAH, but increased significantly in the treatment group.

21 Eosinophilia in the Patients with Carcinomas of the Stomach and Colon, Release of Eosinophilopoietic Factor from Carcinoma Tissue

TATEMI KAJIWARA
The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. KOICHI ISHIGAMI)


Cancer patients are occasionally accompanied by eosinophilia, but the mechanisms remain obscure. To elucidate one mechanism that may account for cancer-associated eosinophilia, the author studied the proliferating factor of eosinophil in human tumors from the patients whose peripheral eosinophil counts are over 500/mm.

Tumor cells were centrifuged at 600×g, 10000×g and 100000×g, respectively, and each extract was added to the human bone marrow cell culture, and eosinophilopoietic activity was assayed.

The result of this study showed that each extract from the tumors of eosinophilic patients had a eosinophilopoietic factor but no eosinophilopoietic activity was found in those from tumors of non-eosinophilic patients.

Clinico-pathological Studies and the Result of Surgical Treatment of Esophageal Cancer

HIROTO HAYASHI
The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. KOICHI ISHIGAMI)


Among 263 patients with squamous cell carcinoma of the esophagus who referred to our institution, 223 (84.4%) underwent resection of esophageal carcinoma with lymph node dissection. From the clinico-pathological studies and the statistical techniques of multivariate analysis, it was concluded that lymph node dissection of the upper mediastium was useful to improve the rate of survival. The five-year-survival rate of the patients who had undergone curative resection for last five years was 45.6%, while it was 21.4% before then.
Effect of Hepatic Vagotomy on the Function of Biliary Tract
and Pariarterial Sympathectomy of the Common Hepatic Artery
as a Countermeasure

HIDEO ARIYOSHI
The Second Department of Surgery, Yamaguchi University School of Medicine.
(Director: Prof. KOICHI ISHIGAMI)


The effect of hepatic vagotomy on the function of biliary tract was investigated in
experimental dogs.

After hepatic vagotomy, the ability of the gallbladder contraction and the gallbladder
tonus were reduced, however sphincter tonus was increased.

It was proved that the relative predominance of sympathetic innervation of the
biliary tract caused such changes.

It was suggested that periarterial sympathectomy of the common hepatic artery
improved such disorder of the biliary function.

Application of Solid Low Residue Diet Consisting Mainly of
Elemental Diet in Colorectal Diseases

Yozo Aoki, Masataka Oita, Yukitomo Sakamoto, Kosuke Shimada,
Masahiro Sakuguchi, Nobuo Takei and Masaharu Katsumi
Department of Gastroenterological Surgery, Wakayama Medical College, Wakayama City,


An application of our modified elemental diet (ED) to Crohn's disease, low output
fistula caused by anastomotic leak after colonic surgery, and pre- and postoperative use
in colorectal surgery are presented. The modified ED, which had been devised to make
the patients easier to take it orally, was prepared and cooked by adding ED with wheat
flour in the ratio of 3 to 1. The clinical usefulness of the modified ED became obvious
in the treatment of the above pathological conditions.

The limit in the use of this modified ED for preoperative colonic preparation are also
discussed.
Percutaneous Microwave Tissue Coagulation in Liver Biopsy: Experimental and Clinical Studies
YOJI TABUSE, KATSUYOSHI TABUSE, KAZUNARI MORI, YUGO NAGAI, YASUHITO KOBAYASHI, HIROMU EGAWA, HIROSHI NOGUCHI, HIROKI YAMAUE, MASAHARU KATSU AND YASUHIKO NAGASAKI
Department of Gastroenterological Surgery, Wakayama Medical College (Director: Prof. Dr. MASAHARU KATSU)
Second Department of Internal Medicine, Wakayama Medical College (Director: Prof. Dr. ISAO YATAKA)

The microwave tissue coagulator was applied for the prevention of hemorrhage and malignant seeding in the needle tract after liver biopsy, as it was an excellent device useful for tissue coagulation and hemostasis.

A specially designed microvave needle electrode, that permitted percutaneous microwave coagulation through the biopsy needle, was examined experimentally and proved to be useful and safe.

Clinically, microwave coagulation combined with liver biopsy was carried out on 44 patients with liver disease and exerted a perfect hemostatic effect with no complications.

It seems realistic to presume that damaged tumor tissue and malignant cells scattered in the needle tract might have been necrotized by microwave coagulation.

Biomechanical Effects of Innominate Osteotomy
WOLFGANG KUESWETTER, YASUSUKE HIRASAWA*
Department of Orthopaedic Surgery, University of Wurzburg (Director: Prof. Dr. A. RUTT)
*Federal Republic of Germany.

The simple pelvic osteotomy in the technique of SALTER was simulated on a macerated female pelvis. The effect of tilting the distal segment of the pelvis outwards, forwards and downwards with different osteotomy angles in the range between 0 and 40° was examined. Depending on the angle of osteotomy, the angle of rotation and the amount of the displacement of the distal segment of the pelvis were measured as well as the CE angle. The data thus ascertained give the operator planning parameters with whose help he can preoperatively estimate the remaining hip parameters depending on the desired improvement of the acetabulum.
Clinical Experimental Evaluation of the Pathogenesis of Gastric Mucosal Injury in Pancreatic Insufficiency
(2) Changes of the Gastric Mucosal Blood Flow in Dogs
SHUHEI HASHIDA
The 1st Department of Surgery, Faculty of Medicine, Kyoto University (Director: Prof. Dr. TAKAYOSHI TOBE)

To clarify the pathogenesis of mucosal injury with pancreatic insufficiency, gastric mucosal blood flow was measured by the hydrogen clearance technique and the heated thermocouple method.

In 7 anesthetized mongrel dogs, gastric mucosal blood flow was measured before and 3 weeks after pancreatic duct ligation. In 7 other anesthetized mongrel dogs, gastric mucosal blood flow was measured before and 3 weeks after ligation of both the pancreatic and common bile ducts.

After pancreatic duct ligation, no change was found in the corpus ventriculi, but the blood flow in the antrum was significantly decreased to 69.0% of the pre-operative level. After ligation of both the pancreatic and common bile ducts the gastric mucosal blood flow was significantly decreased to 72.3% in the corpus and 75.6% in the antrum.

Gastric mucosal lesion was not found after pancreatic duct ligation or after ligation of both the pancreatic and common bile ducts. But histamine-induced gastric mucosal lesion was observed in the part with decreased gastric mucosal blood flow after ligation.

Immunological Studies on the Colorectal Cancer
MASAAKI FUNAMOTO
The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. KOICHI ISHIGAMI)

NK activity of the peripheral blood lymphocytes, serum IAP level and the cellular infiltration around the tumor of the colorectal cancer patients were examined.

The decrease in NK activities and the increase in IAP levels before surgical operation were observed in the Stage IV or V patients with colorectal cancer. Surgical curability had relation to NK activities and IAP levels before operation. The negative vorelation between NK activity and IAP level was found. The T lymphocytic infiltrations around the tumor decreased with advance of staging but the subsets of them did not show the significant change in each stage.

Dynamics of Coagulation-Fibrinolysis by Cathcholamine in Shock
HIRONORI KANEKO
The 2nd Department of Surgery, Toho University School of Medicine (Director: Prof. Dr. SETSUO TAKEUCHI)

We studied the effects of catecholamines on coagulation-fibrinolysis and obtained following results on the relationship between them and DIC during experimental and clinical shock.
1) In experimental adrenalin and noradrenalin administration using dogs, fibrinolytic activation was an characteristic phenomenon.
2) In hemorrhagic shock, observed were an activation of fibrinolysis and a slight activation of coagulation as were in the experimental adrenalin dosing.
3) In endotoxin shock, DIC was not induced via catecholamines but directly by endotoxin itself for coagulation and fibrinolysis were less activated by catecholamines.

These results suggest that catecholamines did not play an important role in DIC.

Application of Endoscopic Papillotomy to Carcinoma of the Duodenal Papilla: As Jaundice Reducing Treatment and as Pre-treatment of Laser Irradiation
HITOYASU KATSUDA, HIROYUKI SHIMIZU and SHINICHI NAGAMINE
Department of Surgery, Wakayama Red Cross Hospital

Endoscopic papillotomy was performed as a jaundice reducing treatment and as a pre-treatment of endoscopic laser irradiation on three patients with carcinoma of the duodenal papilla and was judged effective. In two patients with jaundice, a satisfactory jaundice reducing effect was obtained one month after endoscopic papillotomy. As for the application to pre-treatment of endoscopic laser irradiation, the present method was very useful for complete exposure of a tumor but improvement of quartz fiber and endoscopic devices was considered necessary for the execution of laser irradiation.
Prevention of Vasospasm Following Subarachnoid Hemorrhage
Using a Thromboxane A2 Synthetase Inhibitor (OKY-046) — Clinical Study among Multiple Institutions —

Yasuhiro Yonekawa¹, Hajime Handa¹, Shin-ichiro Okamoto¹, Tomio Ohta², Yoshinari Kamijo³, Yoshifumi Oda³, Akinori Kondo³, Kiyoshi Nij, Toyoshiro Yamamoto⁵, Sadahiko Ban⁵, Satoshi Nakao⁵, Shin-ichi Ohtsuka⁵, Haruhiko Kikuchi⁵, Hisashi Shishido⁷, Shun-ichi Yoneda⁷

Department of Neurosurgery, Kyoto University, Ohsaka Medical College², Ohtsu Red Cross Hospital, Kitano Hospital⁵, Kobe Municipal Hospital⁵, National Cardiovascular Center⁵, Nipponbashi Hospital⁷


Thromboxane A2 synthetase inhibitor (OKY-046) was administered on 20 patients with ruptured aneurysm (registered from Aug. 1985 to Jan. 1986), to evaluate its preventive effect against angiographic and symptomatic vasospasm following subarachnoid hemorrhage.

Patients with negative and minor angiographic vasospasm amounted to 69% of the series, while patients with negative and minor symptomatic vasospasm 90%. Patients without LD and with small LD occupied 76%, while patients with ADL 0—1 75%. These results are considered to be superior in prevention of vasospasm to those of the placebo group of the double blind study of OKY whose result has been reported recently.

It is thus concluded that this thromboxane A2 synthetase inhibitor OKY should be taken into consideration as an effective treatment against vasospasm following subarachnoid hemorrhage.

Clinical Experience of Iotrolan

Masatsune Ishikawa and Hajime Handa

Department of Neurosurgery, Faculty of Medicine, Kyoto University


A new non-ionic water-soluble contrast medium, IOTROLAN, was used for myelography in 10 cases and CT cisternography in 1 case. Satisfactory demonstration of spinal or intracranial subarachnoid space was noted as comparable to the metrizamide. It is convenient for clinical practice not necessary to solve the contrast medium at the spinal tap. There was no major side-effect and its frequency was almost the same as the metrizamide, with tendency of milder in degree and delayed on onset. Thyroid function was not affected in most cases, although delayed recovery was noted in one case of hypothyroidism.
Experimental Studies on Tolerance of Brain to Ischemia Following Occlusion of Cerebral Arteries with Respect to Electrophysiological Parameters

HIDEYUKI SUWA

Department of Neurosurgery, Faculty of Medicine, Kyoto University (Director: Prof. Dr. Hajime Handa)


Experimental studies were undertaken on cat to apply somatosensory evoked potentials as a monitoring tool for assessing the brain function during temporary occlusion of cerebral arteries. Somatosensory evoked potentials were generated in dorsal column-medial lemniscal pathway, which were more tolerant electrophysiologically to ischemic insult than auditory pathway. SEP seems to be more reliable in practice than BAEP as a monitoring method of the brain stem function.

The Role of VIP in the Experimental Dumping as an Humoral Factor

HIKARU HARADA

The Second Department of Surgery, Yamaguchi University School of Medicine (Director: Prof. Dr. Koichi Ishigami)


The VIP level in the portal vein blood was increased and that in the tissue extract from the duodenum was decreased in the experimental dumping model dogs.

In the continuous infusion of VIP into the portal vein at the rate of 4 μg/kg/hr, a more increased cardiac output and decreased systemic vascular resistance were observed than at the rate of 1 μg/kg/hr.

The author proposes that VIP is one of the humoral factors in the occurrence of experimental dumping.

Effect of Secretin and Vasoactive Intestinal Polypeptide on Mucosal Defensive Factors in Cysteamine-Induced Duodenal Ulcer

NORIFUMI JOHN

The Second Department of Surgery, Yamaguchi University School of Medicine


The duodenal mucosal blood flow decreased after the administration of cysteamine. It was significantly inhibited after injection of either secretin or VIP. Healing process of cysteamine-induced duodenal ulcer was studied using anti Bromodeoxyuridine monoclonal antibody, especially from the viewpoint of cellular kinetics of the Brunner's gland.

At the early stage of healing process, labelled cells remarkably increased in the Brunner's glands. And secretin activated cell proliferation in the Brunner's gland.

Mechanism of Prevention against Stress Ulcer by Vagotomy and Famotidine: Viewed from Transmucosal Potential Difference and Histamine Stain by a Fluorescence Histochemical Method

EICHI YOSHINAGA

The Second Department of Surgery, Yamaguchi University School of Medicine


Mechanism of prevention against stress ulcer by vagotomy and famotidine was studied by measuring transmucosal potential difference (PD) and histamine stain by a fluorescence histochemical method, using water immersed and restrained rats.

PD values were lower in vagotomized group and higher in famotidine injected group compared with control group after stress procedures.

In the oxyntic gland area, mast cells which emitted fluorescence of histamine were decreased in the vagotomized group. Injection of the famotidine showed no change in the fluorescence of the mast cells.
Intra-Aortic Balloon Pumping in Infants

HIROYUKI FUKUMASTI*, NORIKAZU TATSUTA**, YOSHIUMI OKAMOTO***, TOSHIHIKO BAN***

* Department of Cardiovascular Surgery, Takeda Hospital, Kyoto.
** Department of Cardiovascular Surgery, Otsu Red Cross Hospital, Shiga.
*** Department of Cardiovascular Surgery, Faculty of Medicine, Kyoto University, Kyoto.


From October 1981 to August 1984, intra-aortic balloon pumping (IABP) was applied in nine patients who were from 2 months to 7 years old, weighted from 3.4 to 18 kg. In eight patients, the miniaturized intra-aortic balloons made in house with 1.0 to 10 ml volumes mounted on No. 3.5 to 6.0 F catheters were used. Effective diastolic augmentation of arterial pressure was accomplished in seven and suprasystolic diastolic augmentation was accomplished in five. There were three long-term and three short-term survivors. Conclusively miniaturization of the equipment has permitted IABP to be used effectively in pediatric patients.

Unfavorable Effect of Abdominal Arteriography on Obstructive Jaundice

YOSHIKATSU OKADA, TAKASHI NOGUCHI, YOSHIUMI KAWARADA and RYUJI MIZUMOTO

First Department of Surgery, Faculty of Medicine, Mie University


Out of 48 patients underwent AAG after PTCD for obstructive jaundice, an intractable jaundice developed in 18 cases (37.5%) with an aggravation of the liver function in blood chemistry and a decrease of the daily bile output, in spite of the adequate biliary decompression. Especially, among 12 patients, who showed an increase of serum levels of both T.BIL and Alp after AAG, an intractable jaundice developed in 8 cases with the high incidence of 66.7%.

Although AAG is one of the useful diagnostic modalities, the indication should be strictly determined, considering the unfavorable effects on obstructive jaundice.

Clinical Analysis of Long-Term Administration of Glyceol

MASATSUNE ISHIKAWA, HAJIME HANDA1, JOHJI HANDA2, KIMIYOSI HIRAKAWA3, TAKASI NAKAMURA3, TAKASHI NAKAMURA4, MASAYUKI FUKUMA5, SIGEYOSI SARAME5, SIGENOSU TAKETOMO7, KENJI ODAWARA5, TOSIROU NISIMURA5, KENJI OGINO10, KAZUYOSI WATANABE11, MITIO TUYAMA12, OSAMU YASUHARA13 and KIMIO SATAKA14

Department of Neurosurg. Kyoto University, Department of Neurosurg. Shiga University of Medical Science2, Department of Neurosurg. Kyoto Prefectural Medical College3, Department of Neurosurg. National Kyoto Hospital4, Departments of Neurosurg. and Neurology4, Kyoto First Red Cross Hospital, Department of Neurosurg. Saiisakai Kyoto Prefecture Hospital5, Department of Circulation Medicine, Medical Center for Adult Diseases, Shiga6, Department of Internal Medicine, Kougou Hospital8, Department of Internal Medicine, Kohoku General Hospital9, Department of Neurosurg. Oumihachimann City Hospital10, Departments of Neurosurg. and Internal Medicine10, Department of Internal Medicine, Moriyama City Hospital11


A cooperative study of long-term administration of Glyceol for more than 7 days was done in 140 cases for evaluating the effectiveness and safety in various neurological disorders such as cerebral infarction, intracerebral hemorrhage, brain tumors, head injury and others.

The overall improvement was noted in 88.5%. The patients with cerebral infarction and brain tumor with moderate severity had more favorable effect, and their improvement was closely related to the dosage and duration of Glyceol. No major side-effect was noted in most of cases.

Although the improvement was noted in 48 patients, the patients with cerebral infarction and brain tumor with moderate severity had more favorable effect, and their improvement was closely related to the dosage and duration of Glyceol. No major side-effect was noted in most of cases.


Although AAG is one of the useful diagnostic modalities, the indication should be strictly determined, considering the unfavorable effects on obstructive jaundice.

Out of 48 patients underwent AAG after PTCD for obstructive jaundice, an intractable jaundice developed in 18 cases (37.5%) with an aggravation of the liver function in blood chemistry and a decrease of the daily bile output, in spite of the adequate biliary decompression. Especially, among 12 patients, who showed an increase of serum levels of both T.BIL and Alp after AAG, an intractable jaundice developed in 8 cases with the high incidence of 66.7%.

Although AAG is one of the useful diagnostic modalities, the indication should be strictly determined, considering the unfavorable effects on obstructive jaundice.

Although AAG is one of the useful diagnostic modalities, the indication should be strictly determined, considering the unfavorable effects on obstructive jaundice.
Abdominal Surgery in Patients with Heart Block with Cardiac Pacemaker in Place

TAKAAKI SUDO, RYUJI SHOBU, HIDETAKA KANAZAWA, RYUJI TSUBAKIMOTO, YOSHIRO FUJI, MASAO KAWAMURA, YOH KASAHARA, HIROYA UMEMURA, SEI SHIRARA, TAKESHI KUYAMA
Second Department of Surgery, Kinki University School of Medicine.

TAKASUMI NISHIOKA, HIDETAKA OKU, HITOSHI SHIROTANI
Department of Cardiovascular Surgery, Kinki University School of Medicine

Recent progress in medical electronics is striking, and it has become possible to perform with safety the gastrointestinal surgery in patients associated with certain heart block disease by the use of pacing. We have recently experienced six cases on which the gastrointestinal surgery was performed under pacing.

Cholelithiasis in Hereditary Spheroctysis: Report of a Case

YOH KASAHARA, MASAHIKO TAKEMOTO, KIICHI NAKAO, SHOZO UEDA, YUKIKAZU YAMADA, NARUMI SONOBE and TAKESHI KUYAMA
The Second Department of Surgery, Kinki University School of Medicine (Director: Prof. Dr. Takeshi Kuyama)

The postoperative course of a 20-year-old female with cholelithiasis in hereditary spheroctysis (HS) undergoing simultaneously cholecystectomy and splenectomy was uneventful. In 56 surgical cases of cholelithiasis in HS including our own since 1960 in Japan, the male-to-female ratio was 1:1.9 with no significant difference in the mean age between sexes. Patients aged 30's and younger were prevalent. Gallstones mainly composed of bilirubin were located in the gallbladder in general. Biliary tract surgery and splenectomy were performed simultaneously in 92 percent of the cases. To prevent cirsus and other complications, biliary tract surgery should be carried out in HS patients with cholelithiasis.
Development of a Bioassay of Opsonic Activity for Kupffer Cell and Humoral Factors Stimulating Phagocytosis

SHIGEKI ARII

The 1st Department of Surgery, Faculty of Medicine, Kyoto University

Using the primary culture of rat Kupffer cells which maintain the specific function of mononuclear phagocyte in vitro, a bioassay of opsonic activity was developed. As phagocytob material 51Cr-endotoxin was employed because of its biological nature that endotoxin is exclusively phagocytized by Kupffer cells and possesses a variety of pathogenetic roles.

Moreover, the opsonic index measured with present method was not affected by opsonic proteins such as IgG, complement components or plasma fibronectin. The findings suggest that unknown humoral substances enhancing the opsonic index are present in the fraction of 50%–60% saturated ammonium sulfate precipitates.

Biological Significance and Prognostic Role of Opsonic Activity for Kupffer Cell Phagocytosis in Experimental Liver Injuries and Partially Hepatectomized Patients

SHIGEKI ARII

The 1st Department of Surgery, Faculty of Medicine, Kyoto University

In the rats with OCl4-induced liver cirrhosis, high opsonic activity was observed, being suggested to be a compensatory response for maintaining the host defense. By contrast, in the rats with fulminant hepatitis, opsonic index was remarkably decreased. Such a decrease indicated a failure of the compensatory mechanism in the reticuloendothelial system.

Based on the above results, the clinical cases were analyzed. Three distinct types of responses in the opsonic index after partial hepatectomy were observed. Evidence will be presented indicating that the opsonic index is a reliable indicator of the outcomes of the partially hepatectomized patients.

Experimental Studies on Influences of Portal Vein Interruption on the Pancreas

KOUSUKE SHIMADA

Department of Gastroenterological Surgery, Wakayama Medical College

Influences of transient portal vein interruption on the pancreas were studied in rats. As regards influences on the general condition, an increase of serum amylase activity and serum acid phosphatase activity, and a decrease of femoral artery pressure were observed. As regards changes of the pancreas, a decrease of oxygen saturation in the tissue and acid phosphatase activity in the homogenate, an increase of wet weight, and histological changes by light and electron microscopy were observed. These changes were in proportion to the length of interruption time. These changes were not reduced by divided interruption but slightly reduced by premedication with a protease inhibitor.

Acute Effects of 1-[Bis(4-fluorophenyl)-methyl]-4-(2,3,4-trimethoxybenzyl)-piperazine dihydrochloride, KB-2796, on the Cerebral Blood Flow in Unanesthetized Cats.

TOSHIRO KANAZAWA, YOKO NAKASU, MASAYUKI MATSUDA, and JYOJI HANDA

Department of Neurosurgery, Shiga University of Medical Science

Effects of an intravenous administration of KB-2796, a new synthetic Ca++ channel blocker, on the cerebral blood flow in unanesthetized immobilized cats were studied using hydrogen clearance method. Systemic blood pressure showed a mild decrease, but pCO2, pO2, and pH of the arterial blood remained unchanged during the experiments. KB-2796 in the dosage of 0.1 and 0.3 mg/kg showed a dose dependent increase in the cerebral blood flow. Effects of 1.0 mg/kg did not differ significantly from those of 0.3 mg/kg. As several drugs known to increase the cerebral blood flow in anesthetized experimental animals fail to show any such effects in unanesthetized conditions, it seems to be stressed that KB-2796 does increase the cerebral blood flow in cats in the unanesthetized, immobilized condition as well.
Synergy of Microwave Coagulation and Streptococcal Preparation (OK-432) in Experimental Tumor in Regard to the Interleukin 2 Producing Activity

Hiroki Yamaue, Masaharu Katsumi, Katsuyoshi Tabuse, Yoji Tabuse, Hiromu Egawa, Hirohiko Noguchi, Yugo Nogai, Yasuhito Kobayashi and Kazunari Mori

Department of Gastroenterological Surgery, Wakayama Medical College


The interleukin 2 (IL-2) producing activity of spleen cells was investigated in use of the microwave coagulation (MC) with OK-432 in experimental tumor. Mice transplanted Meth A x fibrosarcoma were treated by MC and/or OK-432. Tumor growth in the group treated by both methods was significantly inhibited as compared with that of either method alone. Viability percentage was higher in the group treated by both methods. Similarly, and from the view point of IL-2 producing activity of spleen cells, synergy of MC and OK-432 was proved.

Depending upon the facts mentioned, the clinical application was done. The patients treated by both MTC and OK-432 were improved in symptoms and signs, still more IL-2 producing activity was augmented.

The Influence of Laparotomy-Related Stress on Gastric Secretion

Sumikazu Oka

Department of Gastroenterological Surgery, Wakayama Medical College


With the view to examining the influence of laparotomy-related stress on both aggressive and defensive factors of gastric mucosa, pre- and post-operative gastric secretion was measured in a total of 107 operative cases of choledolithiasis and colorectal diseases.

Laparotomy-related stress caused an increase in blood cortisol level, gastric acid hypersecretion and a decrease in hexosamine in the gastric juice. Extraludal anesthesia and epidural morphine administration caused an inhibition of increase in blood cortisol level, of gastric acid hypersecretion and of decrease in concentration of hexosamine. Cimetidine exerted an inhibitory effect on gastric acid hypersecretion after laparotomy.

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Treatment of Cerebral Infarction in the Acute Stage with Synthetic Antithrombin bin MD-805: Clinical Study among Multiple Institutions

Yauhiro Yonekawa, Hajime Handa, Shinichiro Okamoto, Yoshitami Kamiyama, Yoshifumi Oda, Jun-Ichi Ishikawa, Harumi Tsuda, Yoshihisa Shimizu, Manabu Satoh, Tatsuto Yamagami, Ichiro Yano, Yoshiharu Horikawa, Eimei Tsuda

Department of Neurosurgery, Kyoto University, Department of Neurosurgery, Ohtsuka Red Cross Hospital, Department of Neurosurgery, Mauizu Municipal Hospital, Department of Neurology, Kyoto II Red Cross Hospital, Department of Neurosurgery, Shimizu Surgical Hospital, Department of Neurosurgery, Ijinkai Takeda Hospital, Department of Neurosurgery, Neurology, Rakuwakai Otowa Hospital, Department of Neurosurgery, Soseikai Hospital


京都大学脳神経外科 木村善弘, 菅本新一, 大津赤十字病院 上条緑成, 堤田祥史, 護国市民病院 石原一郎, 京都第二赤十字病院 佐々治己, シミズ外科病院 津田春夫, 枝藤学, 医仁会戸田病院 山上達人, 津和会音羽病院 矢野一郎, 斎川義治, 蘇生会病院 津田永明

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Clinical Application of the Urokinase-Im mobilized Polyurethane Catheter

Masahiko Matsumoto, Yoshifumi Okamoto, Yutaka Konishi, Shinichiro Nomoto, Junichi Soneda, Yasunori Fujiwara, Kazunobu Nishimura, Toshikiko Ban and Katsuihiko Suyama

Department of Cardiovascular Surgery, Faculty of Medicine, Kyoto University, *Unitika Research and Development Center


Urokinase-immobilized polyurethane tubes which had a thrombolytic luminal surface were used in 23 patients as central venous catheters. Chatheters were inserted into the inferior vena cava via the femoral vein at the time of operation to evaluate the central venous pressure and were then used for intravenous fluid therapy. These catheters were removed after one to 10 days (the average 4.8 days). Macroscopically, no thrombus was seen on the surface of the catheter. These catheters were examined by scanning microscopy to evaluate the surface characteristics. No thrombus formation was observed within five days. After seven days, the luminal surface of the catheter was covered by a thin cellular thrombus formed by platelets, red blood cells and white blood cells entrapped in fibrin strands. Our study demonstrated that the urokinase-immobilized Catheter had adequate antithrombogenic activity for five days of clinical use.

京都大学医学部心臓血管外科 松本善恵, 岡本好史, 小西裕, 野本慎一, 松本純一, 塚原康典, 西村和順, 伴敏彦

ユニチカ中央研究所 岡崎勝彦
Extrahepatic Growing Hepatocellular Carcinoma

TAKAAKI SUDO, RYUJI SHOBU, HIDETAKA KANAZAWA, RYUJI TSUBAKIMOTO, YOSHIRO FUKUJIMA, MASAO KAWAMURA, HIROYA UMEMURA, SEI SHIRAHA, TAKESHI KUYAMA, and TAKASHI SHIMOTO*

The Second Department of Surgery Kinki University School of Medicine.

* Department of Surgery, Kosei Hospital


A case of extrahepatic growing hepatocellular carcinoma is present and Japanese literatures were reviewed. A 42 year old man was admitted to this hospital on December 27, 1985 complaining of epigastralgia and nausea. Echogram and CT showed large tumor in the right hepatic lobe. By the operation, large extrahepatic growing hepatocellular carcinoma was resected.
Effects of 1-[bis(4-fluorophenyl)methyl]-4-(2,3,4-trimethoxybenzyl) piperazine dihydrochloride, a New Synthesized Ca2+ Blocker KB-2796, on Free Fatty Acid Liberation in Ischemic Brain in Rats
TOSHIRO KANAZAWA, MINORU KIDOOKA, MASAYUKI MATSUDA, and JOYI HANDA
Department of Neurosurgery, Shiga University of Medical Science.

Effects of a new synthetic Ca2+ antagonist KB-2796 on the liberation of free fatty acids in the ischemic rat brain were studied. KB-2796 attenuated brain free fatty acid accumulation following decapitation, and this effect was most pronounced in 1-minute- and 60-minute-ischemia models. This effects of KB-2796 seem to potentiate its therapeutic usefulness in cerebrovascular diseases.

Refobacin Concentration in Blood Serum, Urine and Wound Secretion: A Comparative Study of Refobacin-Palacos and Implast-Gentamicin in the Total Hip Replacement
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The value of the Gentamicin concentrations in serum, urine and wound secretions of 9 patients whose total prosthesis were implanted with Refobacin-Palacos was compared with the analysis of 8 patients whose endoprostheses were implanted with Implant-Gentamicin. The following results were obtained.
1) The Implant-Gentamicin group reflected a positive bioequivalence with an overall high Gentamicin concentration wound secretions and blood serum with relative bioavailability of the Gentamicin.
2) The renal elimination in Refobacin-Palacos group was much more distinct than in Implant-Gentamicin group, especially on the first day.

Würzburg 大学 Rabenseifner, L., Leimbeck, R.

Analysis of Microvascular Decompression for the Treatment of Trigeminal Neuralgia and Hemifacial Spasm
KOREAKI MORI, MASANORI MORIMOTO, MASAKI KURISAKA, YASUFUMI UCHIDA, and PATRICK EGHWRUDJAKPOR
Department of Neurosurgery Kochi Medical School Kochi, Japan

Results of the treatment of 61 patients with trigeminal neuralgia (TN) and 65 patients with hemifacial spasm (HFS) by microvascular decompression (MVD) and their problems are here reported. In atypical TN, the results were less favorable. Based on the degree of abnormal vascular contact on the trigeminal nerve, the root entry zone of the trigeminal nerve in TN may be more extensive than the root exit zone of the facial nerve in HFS. In cases of HFS, MVD should be limited to typical cases with care being taken to thoroughly examine the root exit zone in order not to miss any offending vessel. It is also necessary to avoid undue manipulation to prevent operative complications.

高知医科大学脳神経外科 森 暁明, 森本雅徳, 栗坂昌宏, 内田泰史, Patrick Eghwrudjakpor

Giant Aneurysm of the Azygos Anterior Cerebral Artery
TATSUHITO YAMAGAMI, HAJIME HANDA, NOBUO HASHIMOTO, HIROKAZU NAGATA and HIDETOSHI WATANABE
Department of Neurosurgery, Kyoto University Medical School

Giant aneurysm of the azygos anterior cerebral artery is reported. The aneurysmal wall was partially calcified. This aneurysm was successfully clipped. Giant aneurysm of this location is very rare.

京都府立医科大学整形外科 平沢義介
Mediastinal Hemorrhage as a Complication of Retrograde Brachial Angiography

MASAHARU ICHIKAWA, KAZUYOSHI WATANABE and TATSUYA OKADA
KENICHI MATSUMURA
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Mediastinal hemorrhage with extravasation of the contrast medium occurred as a complication of retrograde brachial angiography in a 71-year-old female. Immediately after a manual injection of the contrast medium, the patient complained of severe chest pain and the chest X-ray showed a picture not unlike a dissecting aneurysm of the aorta. Dissection of the aorta was excluded by follow-up radiologic studies.

Transfemoral manipulation of a guide wire and/or a catheter prior to the retrograde brachial injection was assumed to have caused intimal damage in the brachiocephalic artery.

A Case of Hereditary Spherocytosis Associated with Cholelithiasis in a 6-Year-Old Boy


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A 6-year-old boy was admitted for anemia and jaundice. Like his father, he was diagnosed as hereditary spherocytosis. Abdominal ultrasonography suggested the existence of cholelithiasis. Splenectomy and simultaneous cholecystectomy were performed with favourable results. Cholelithiasis seldom appears in the children aged 10 years or less, even if it is associated with hereditary spherocytosis. As being non-invasive, meanwhile, abdominal ultrasonography can be performed even for children without fear. In diagnostic case of hereditary spherocytosis, it is important to investigate by means of abdominal ultrasonography whether or not cholelithiasis is associated with.

Nothnagel Syndrome with Midbrain Hemorrhage

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A 55-year-old male suffering from headache and diplopia was found to have right oculomotor palsy, paralysis of upward gaze of his left eyeball, and cerebellar ataxia on the left side, signs known as Nothnagel syndrome that is quite rare. Repeated CT scannings and MR imagings confirmed the diagnosis of spontaneous hemorrhage in the midbrain, whereas angiography failed to disclose any vascular anomalies.

Reports on the Nothnagel syndrome were reviewed, and the oculomotor innervation of the contralateral superior rectus muscle was discussed.

滋賀医科大学脳神経外科 市川正幸，渡辺一良，岡田達也，松村憲一

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Akihico Shino, Masaharu Ichikawa, Masayuki Matsuda, and Jyoji Handa

Department of Neurosurgery, Shiga University of Medical Science, Ohtsu, Japan


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