

Abstracts

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Statistical Survey on Urolithiasis in Japan

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(Director : Prof. T. Inada)

1: 143 — 150 (September) 1955

We sent cards of inquiry to urological clinics of the principal hospitals all over the country, and receiving 130 answers from them, we made a statistical investigation on "Urolithiasis in Japan".

To find the frequency of urolithiasis, we obtained the percentages of urolithiasis in whole numbers of ambulatory patients of urological clinics, and compared the results regionally. Generally speaking, it was less in the northern regions and more in the southern regions, especially much more found along the coastal regions of the Seto Inland Sea and a part of the Kyushu region. As the total figure throughout the country, the patients of urolithiasis were 3.84 % of the ambulatory patients.

The location of calculus was investigated in these twenty years, and in 1954 it was classified as follows :

Ureteral calculus	45.12 %
Renal calculus	27.31 %
Vesical calculus	20.67 %
Urethral calculus	4.66 %
Prostatic calculus	2.17 %

Surveying the numbers of urolithiasis in the past twenty years, we found that there was one peak in 1939 and then it gradually decreased until 1945. Thereafter there was rapid increase with a sharp curve in 1954 approximately two and a half as much as the number in 1939.

The increase and decrease of the urolithiasis in the lower urinary tract was very little, but there were two so-called stone waves in the urolithiasis in the upper urinary tract, one in pre-war days and the other in post-war. The post-war stone wave is especially remarkable.

We further more made some investigations about the relation between the disease and sex, age, and occupation.

Studies on Dissolution of Urinary Calculi (Report 4)

Qualitative analysis of amorphous organic components of urinary calculi

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1 : 151 — 163 (September) 1955

For the purpose of the therapeutic dissolution of urinary calculi it seems to be very necessary to clarify the organic components of them, the study of which has been scarcely reported. The organic components reported have been analyzed only by the methods of elementary analysis.

Recently its histochemical study has been also reported.

The present paper reports the results of the qualitative analytical studies for the amorphous organic components of urinary calculi by the methods of biochemical analysis.

45 g of mixed powder of urinary calculi (from bladder 3, kidney 1 and mixed pieces of various calculi which were used for the previous experiments but the origin of them remains unknown) was extracted, each in a separated fraction, by agents in the following order successively: petroleum ether, ether, chloroform, alcohol, cold water, hot water, 1% aqueous solution of HCl, 5% that of NaOH and 5% that of HCl.

Then each of the extracts was treated by some chemical procedures such as distillation, vacuum distillation, neutralization, salting out and hydrolysis with HCl solution.

All of these fractions were analyzed by usual biochemical qualitative methods as below.

Tests for protein and amino acid :

ninhydrin test. biuret test. Millon's test. Hopkins-Cole's test. Sakaguchi's test. Molisch's test. precipitation test by lead acetate, ferrocyanide, picric acid, phosphotungstic acid, sulfosalicylic acid and alcohol. heat coagulation. saltion out by ammonium sulphate.

Tests for carbohydrate :

Benedict's test. Nylander's test. orcin-HCl test. diphenylamine test. reduction test by Fehling's reagent. naphthoresorcin test. cysteine-H₂SO₄ test.

Tests for lipid :

acrolein test. Salkowsky's test. precipitation test by cadmium chloride. Lieberman-Burchard's test.

Tests for other components :

Ehrlich's aldehyde reaction. Obermyer's test. Jaffe's test. murexide test. diazo reaction. Schledinger's test. precipitation test by mercury acetate. color develop-

ment by ferric chloride. Weiss's test. combustion. test by adding NaOH or acetic acid. test of P and S after hydrolysis by acid.

Next, for protein, polysaccharide (using the extracting method of Sauda and Egami's technique) and nucleic acid (using the Levene's extracting method) in the powder was specifically analyzed.

As the results of the above tests it was detected that urinary calculi have amino acid, protein, derived protein, mucopolysaccharide with and without SO₄, lecithin-like substance, animal gum-like substance and urinary pigment as the amorphous organic components.

The Urolithiasis in the Tokushima District

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1: 164 — 172 (September) 1955

The author did the statistic observation of the urolithiasis in the Tokushima district from establishment of our clinic (Dec. 1948) to Dec. 1954, and the results was nearly as like as in other districts. But the frequency (6.3 %) was partially higher than in other districts, particularly the calculi in lower urinary tract was predominant.

As the considerable causes of this fact, the author will attach great importance to the speciality of the composition of population and the influences of functional disturbances of autonomous nerve system and endocrine glands caused by mental and corporal overexertion besides the relation of temperature as a provincial merit.

Studies on 17-Ketosteroid in the Realm of Urology

Report II : Amount of Excreted 17-KS in the Urine of Normal Adults

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1: 173 — 176 (September) 1955

I measured the amount of 17-KS in the urine of normal adults (76 males and 27 females).

The range of 17-KS in 47 normal male adults (aged 20-49) extends from 7.02 to 21.2 mg/day with a mean of 12.45 mg/day.

The range for 18 normal females is from 4.2 to 13.8 mg/day with a mean of 8.49 mg/day.

On the Absorptions of Bacterium in the Seminal Vesicles

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1 : 177 — 181 (September) 1955

Absorptions of the bacterial solutions in the seminal vesicles of normal and immunized guinea pigs has been observed.

The solution of staphylococcus aureus (FDAP209) has been better absorbed in the seminal vesicles of normal guinea pigs than in any other genitatory organs.

Bacterium instilled to the seminal vesicles has first appeared in blood for 30-60 minutes after instillations. A count of bacterium in blood got maximum in 60-120 minutes and then decreased gradually.

In the immunized guinea pigs by same germ-vaccin, absorptions of these bacterium has been definitely inhibited.

The above mentioned results seem to show that the seminal vesicles have a significant role as a focus of various infectious diseases.

Antigen-Antibody Reaction and Leucocytes, A Supplementary Study (Report III)

Mechanism of the So-called Yoshida's Reaction*

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1 : 182 — 195 (September) 1955

It was reported in the first report of this series that in the majority of urogenital tuberculosis a transient leucopenia was brought about when a small quantity of tuberculous vaccine or tuberculin was injected subcutaneously. It was reported also that this phenomenon disappeared several weeks after the removal of the cardinal tuberculous lesions, even if the tuberculin reaction preserves the same

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intensity. In the second report, the change in the leucocytes count due to a reinjection of the same antigen in sensitized rabbits was described. The antigens employed were typhoid vaccine, human serum, BCG and purified variola vaccine (the animals sensitized with BCG were reinjected with tuberculin). The dosage of the second injection was so small that it did not influence on the leucocytes count in nonsensitized rabbits. Nevertheless, a transient leucopenia appeared in the majority of the sensitized rabbits by such antigens as typhoid vaccine and the human serum which were considered to produce humoral type of antibodies. On the contrary, the leucopenia appeared only in a small number of the sensitized rabbits by such antigens as BCG and purified variola vaccine which were considered to produce mainly tissue antibodies. These facts indicated that such a transient leucopenia might only be caused by an antigen-antibody reaction in body fluid.

The present study aimed to make clear the mechanism of such a transient leucopenia. For this purpose, the problem was studied first as to whether the crystalline egg-albumin (in small dosage) would cause such a leucopenia in rabbits which had been passively sensitized by a transfusion of serum obtained from actively sensitized rabbits by the same antigen. Then the influence on the leucopenia thus produced of anti-histamine and anti-plasmin was studied. The influence on the leucocytes count of the precipitate was studied also which was produced by an antigen-antibody reaction *in vitro* and was injected into normal rabbits. As a clinical study, it was investigated the influence of anti-histamine and anti-plasmin on Yoshida's reaction, a transient leucopenia which was brought about in patients of uro-genital tuberculosis by an injection of tuberculin. Thus the following results were obtained :

1) A recognizable change in the leucocytes count was not demonstrated in the streaming blood of normal rabbits when 0.1 % solution of crystalline egg-white albumin or anti-serum (0.2 ml/kg) was intravenously injected.

2) A significant leucopenia was temporarily brought about, however, when the same antigen was introduced in the same way into rabbits which had passively sensitized with anti-serum against the same antigen. The leucopenia appeared less pronounced, however, when the same antigen was given again 21 hours after the first injection.

3) A greater leucopenia with a longer duration was brought about when a serum with a higher precipitation titer was employed in the passive sensitization.

4) The leucopenia in actively sensitized animals seemed to be impeded by anti-histamine to some extent, while that in passively sensitized animals did not seem to be impeded to any extent.

5) A slight leucopenia was temporarily brought about by an injection of histamine but it was completely inhibited by antihistamine injected simultaneously.

6) The leucopenia in passively sensitized animals was not inhibited by anti-plasmin injected simultaneously.

7) The transient leucopenia was brought about when a small quantity of pre-

precipitate (produced by an antigen-antibody reaction in vitro) was intravenously injected into normal rabbits, and the leucopenia was not inhibited by anti-histamine. A slight but typical leucopenia was also brought about when such precipitate was used as produced by mixing highly diluted antigen with antibody at the most adequate ratio.

8) Yoshida's reaction by tuberculin in patients of uro-genital tuberculosis was not inhibited by anti-histamine or antiplasmin.

The following conclusions were derived from the present data as well as those reported previously as the first and second report of this series.

1) A transient leucopenia with is brought about in tuberculous patients when a small dosage of tuberculous vaccine or old tuberculin is subcutaneously injected, and which is known as Yoshida's reaction, is caused by an antigen-antibody reaction between tuberculin and the humoral antibody in the serum of the patients. It has, therefore, no relation with the tissue antibodies which cause the cutaneous reaction known as tuberculin reaction. For this reason, Yoshida's reaction does not appear parallel with the intracutaneous tuberculin reaction.

2) Positivity of Yoshida's reaction may be influenced by the amount of tuberculous antibodies in the serum, for a leucopenia is of higher degree and of longer duration when the precipitin titer is higher as indicated by the experiment with eggalbumin. An increase in the intensity of Yoshida's reaction may, therefore, indicate an increase in the titer of serum precipitin against tuberculous antigen of the respective patient; thus, probably, an increase in the activity of the tuberculosis lesion.

3) Yoshida states that his reaction can be employed in the differentiation of tuberculous diseases from others, and in the estimation of the activity of tuberculous lesions and of prognosis. The present author considers that the results of his experiments corroborate Yoshida's assertion.

Dorsal Cystography (Squat Shot)

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1 : 196 — 203 (September) 1955

Dorsal cystography is described by William H. Boyce et al and it has proved valuable for demonstrating pathologic changes which would not be visualized by other methods. Satisfactory roentgenologic delineation of the posterior area of the bladder, the region adjacent to the trigonum and the retrovesical portion of the ureters is not always obtained by the standard technic of antero-posterior, oblique and lateral views.

In 28 selected cases who underwent dorsal cystography and were found to have ureteral reflux, tumor and diverticula of the bladder, the pathologic changes were unmistakably and distinguishably demonstrated by the single squat shot or with routine cystography in all cases, compared with 6 in 28 cases by anteroposterior view. Moreover we demonstrated stricture and calculus in retrovesical portion of ureter by this technique combined with "direct pyelography" which had been previously reported by us in 1955 elsewhere.

Technic: - The bladder is filled with 100-200 cc of 10-20 % sodium iodide in the usual manner. The patient is asked to sit on the roentgenographic table and then he is instructed to grasp his ankles and to lean as far as possible so that he sits over the film.

The author thanks Prof. Inada for his invaluable assistances in guiding this work.

A Case of the Spontaneous Subcapsular Renal Hematoma

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(Director: Dr. T. Takahashi)

1: 204 — 206 (September) 1955

A case of the spontaneous subcapsular renal hematoma has been presented which was the first report in Japan.

The patient was fifty aged woman, arising from the left kidney, and nephrectomy was performed.

On the Chyluria in Tokushima Prefecture

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1: 207 — 213 (September) 1955

We have treated, during the past six years, thirty patients with chyluria, which comprise 1.04 % of the total patients. Females outnumbered males, 19 to 11, and usually in persons between 61 to 70 years of age. Chyluria is prevalent in areas facing sea and districts along Yoshino river, and commonly occurs in spring and summer. Of 30 patients, 18 were chyluria and 12 hematochyluria. As accompanying urologic disturbances, 15 had dysuria, 4 pollakiuria and 5 pain during the urination. There were complaint of lumbago in 3 patients and general weakness in 5 patients.

Preventive Measures of Venereal Diseases by Oronine Ointment

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1 : 214 — 217 (September) 1955

1) We used Oronine Ointment on sea-crews for the purpose of preventing venereal diseases, and in nearly all cases we got perfect success without any second reaction.

2) Among those to whom this ointment were applied, 3.1 % of them got gonorrhoea, while 11.8 % of the unapplied got gonorrhoea.

3) 1.6 % of the applied got N.G.U., while 3 % of the unapplied got the same disease.

4) In vitro, the Oronine Ointment showed a sufficient sterilizing power upon gonococci and other bacilli in a short time.

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Studies on Benign Prostatic Hyperplasia

III. Clinical Study of Urinary Acid Phosphatase

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From the Department of Urology, Faculty of Medicine, Kyoto University

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1 : 219 — 226 (December) 1955

1. Urinary acid phosphatase of 80 patients with uro-genital diseases was measured. The results were as follows :

The average of the urinary acid phosphatase level in the patients with benign prostatic hyperplasia and carcinoma of the prostate did not show any clinically significant difference compared with the level in the normal adult male. Also, no other differences were observed in other diseases except in tuberculosis of the prostate gland, haemospermiasis, or previously castrated patients. All these showed markedly low urinary acid phosphatase level.

2. The urinary acid phosphatase increased when androgen was administered by IM-route, but it decreased when estrogen was administered. These changes were temporary and were especially more distinct in castrated patients.

3. The urinary acid phosphatase was not affected by deep x-ray therapy and

the injection of "Interenin" (which is one of the adrenocortical hormone preparations), or by the transplantation of testes.

4. The degree of change in urinary acid phosphatase due to the administration of sexual hormone preparations showed minimal difference in various diseases. Even in the same disease, however, i. e. in benign prostatic hyperplasia or carcinoma of the prostate, one can find considerable difference in the sensitivity to the administration of sexual hormones. Then, it seems that in the patient whose urinary acid phosphatase level is easily affected by the sexual hormones, his clinical symptoms improve on hormonal treatment. But, in the patient whose urinary acid phosphatase level is hardly affected by sexual hormones, his clinical symptoms show no noticeable changes.

5. No correlation between the serum acid phosphatase level and the urinary acid phosphatase level has been recognized.

Experimental Studies on Vesical Tuberculosis

Report III: The effect of chemotherapy on experimental vesical tuberculosis

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From the Department of Urology, Faculty of Medicine, Kyoto University

(Director: Prof. T. Inada)

1: 227 — 237 (December) 1955

Both streptomycin and isonicotinic acid hydrazide show excellent efficiency on experimental vesical tuberculosis of the rabbit, and streptomycin showed a better effect than INAH from the histological standpoint. I found that PAS and TB-1 has far less effect than streptomycin or INAH, and has almost no recognizable effect on tuberculous granulation tissue.

On the Clinical and Experimental Survey of the Urinary Candidiasis

(2) Experimental section

JOJI ISHIGAMI and TAKESHI HINO

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SHOHEI WATANABE

From the Department of Dermatology, Faculty of Medicine, Kyoto University

SHIGETOSHI HARAMOTO

From the Department of Urology, Showa Medical College

HISAO IGUCHI

From the Department of Dermato-Urology, Kitano Hospital, Osaka

1 : 238 — 245 (December) 1955

The urine and excretions of the urinary tract were cultured in 45 cases of the genito-urinary diseases showing resistance against the treatments with various antibiotics, and in 4 of them, candida were isolated.

Intracutaneous injection was carried out with the filtrated solutions of candida albicans isolated from one case, in 103 persons.

The positivity of this skin reactions were as follows ; on 50 of sound persons as the control, 26 % were positive, while in 46 of the trichophytiasis, 45 % ; in 5 of urethritis simplex, 80 % ; penicillin allergy, urinary candidiasis, every 100 %.

Living candida albicans isolated from one case experienced by ourselves, was injected to the guinea pigs, which had been dead for one week after the applications and candida had been cultured from the seminal vesicles and bladders of these animals.

It was recognized that lungs, hearts, livers, spleens, kidneys, and bladders of these animals had been attacked on foreign body reactions and some degenerations by candida albicans.

Diagnosis of the Perinephritis by Pneumoretroperitoneum

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(Director : Prof. M. Sugiyama)

1 : 246 -- 254 (December) 1955

We applied pneumoretroperitoneum to diagnosis of the perinephritis and the following results were obtained (air is used as injected gas).

1) When productive changes of perirenal connective tissues, some abscess and adhesion to perirenal tissues existed, we found disappearance of obscurity of nephrogram and M. psoas edges on account of insufficient filling of the air to its side.

2) We could observe limitation or disappearance of the ascending and motion-limit of kidney and diaphragma by watching the film (image) at the moments of deep inspiration and expiration.

3) When strong adhesion to perirenal tissues existed, filling and diffusion of injected gas into the retroperitoneal cavity could not be rapidly performed.

In such cases, we photographed about 24 hours after gas injection. Thus we can procure a better picture.

Diagnostic effect of this method is increased by combination with pyelography and angiography of kidney. Furthermore, we are enabled to diagnosis better perinephritis by synethetic judgement with other clinical findings.

A Case of Pelvic Spots (So Called "Beckenflecke") Diagnosed by Pelvic Phlebography Utilizing the Cavernous Body of Penis

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1: 255 — 257 (December) 1955

A farmer aged 63 years, was admitted to our clinic on 2nd of December, 1954 with a history of three years' dysuria, miction pain, frequent urination and recent perineal pain.

The roentgenogram of vesical region showed over 21 shadows of stone and 2 of pelvic spot in the left pelvic space.

27 vesical stones were removed by sectio alta and other 2 stones by Young's cystoscope. The roentgenogram of vesical region after operation always showed 2 shadows of pelvic spot.

We applied the pelvic phlebography by the injection of opaque media (33 % Sugiuron) into the cavernous body of penis to this case. Two pelvic spots were found on the shadows of the left dilated pelvic-veins. The right 3 veins were not dilated. We perceived that the left pelvic veins were dilated by stenosis resulting from the 2 pelvic venous stones.

By the pelvic phlebography we diagnosed that the pelvic spots were venous stones in V. vesicalis.

A Case of Prostatism caused by Granulomatous Prostatitis

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(Director : Prof. T. Kusunoki)

1: 258 — 262 (December) 1955

I reported a case of granulomatous prostatitis, named by Tinner and Mc Donald, whose chief complaint was prostatism.

Therapeutic Effect of the PLACENTA SUSPENDED for the veritable bedwetting

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(Director : Prof. S. Shigematsu)

1: 263 — 266 (December) 1955

We applicated the PLACENTA SUSPENDED with respect to 15 cases of veritable bedwetting, the therapeutic effect as follows.

perfect cure	— 4 cases	26.6 %
validity	— 3 cases	20.0 %
validity a little	— 3 cases	20.0 %
invalidity	— 5 cases	33.3 %
general therapeutic effect		— about 70 %.

We are simply recognize as for No. 7, and No. 13 in much validity. Secondary effect and general trouble are no found in all example. PLACENTA SUSPENDED-therapy is worth to try for veritable bedwetting.

Influence of “Stronger Neo-Minophagen C” on the Urinary Protective Colloids in the Patient with Urolithiasis

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1: 267 — 269 (December) 1955

The urinary protective colloids were measured by the Ogawa's colloid-reaction in 7 cases of urolithiasis to whom we administered “Stronger Neo-Minophagen C”, and the increase was recognized in 6 cases.

The effective component of this medicine is considered to be glycyrrhizin, especially glycyrrhetic acid.

The amount of salt precipitated by inserting an electrode into the urine definitely decreased when Stronger Neo-Minophagen C was used.