Abstracts

Vol. 2, No. 1

Studies on Serumprotein in the Realm of Urology

The 3rd Part ; Experimental Studies

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2 : 1 —12 (January) 1956

In normal and experimental hypoproteinemic rabbits, I measured the change of serumprotein and the formation of blood after bleeding, operation and transfusion.

1. I bred some rabbits by established protein-deficient foods for about one month and made them markedly hypoproteinemia.

2. After 2 weeks of bleeding 10 cc of blood per Kg. of weight using a normal rabbit, I found the recovery of the serumprotein and the formation of blood.

3. When given the protein-deficient foods at the time of the bleeding, the serumprotein, hemoglobin and hematocrit did not recover, and A/G was lower than in step number one above.

4. Giving the injection of physiological salt solution to hypoproteinemic rabbit, caused hydremia temporarily but it soon recovered.

5. To the hypoproteinemic rabbit, I gave the injection of aminoacid solution (5 % Politamin), but proteins were almost the same as before. Adding the glucose-solution into that, they increased a little.

6. Giving the same quantity of blood by transfusion to a hypoproteinemic rabbit for three days, it did not show so much change in the concentration of serumprotein, but hemoglobin and hematocrit increased remarkably.

7. When the normal rabbit underwent nephrectomy, it became hypoproteinemic and anemic just after the operation temporarily, but afterward, it recovered.

8. Injecting of Politamin and glucose solution at the time of nephrectomy, the recovery was quicker.

9. When I did nephrectomy to a hypoproteinemic rabbit, the serumprotein, hemoglobin and hematocrit were remarkably decreased, and after 2 weeks I could non find their recovery.

Studies on Benign Prostatic Hyperplasia

IV. The Influence of Sexual and Gonadotropic Hormones upon the Phosphorus Metabolism of the Testes and the Prostate Glands.

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2 : 13 — 18 (January) 1956

1. By the use of radio-active phosphorus as a tracer, the phosphorus metabolism of the prostate gland and testis in rabbits were examined according to "Schnider's Method"

2. These animals were divided into the following groups; (a) estradiol benzonate of 11-13 mg. in total dosage were injected for 38-50 days. (b) Testosterone propionate of 14-17 mg. were injected for 27-51 days. (c) During 22 days after castration, estradiol benzonate of 4.2-9 mg. in total were injected. (d) Hypohorin, which is one of the gonadotropic hormone preparations, of 120-160 R. U. in total were injected for 18-22 days. (e) Control : Normal adult male rabbit.

3. The results were as follows: (a) It seems that gonadotropin and testosterone propionate increase the phosphorus metabolism of the prostate gland, and estradiol benzonate decreases it. The tendency of decreasing prostatic phosphorus metabolism was more remarkable in the castration plus estradiol administration group than in the administration of estradiol only. (b) Hypohorine (gonadotropic hormone) increases the phosphorus metabolism of testes; testosterone propionate and estradiol benzonate decrease it, the estradiol benzonate being the more effective of the two. (c) Histological features of the testes and prostate glands, which were used in above mentioned experiment, were correspondent with the result of the phosphorus metabolism in these organs.

The Absorption of the Antibiotics on the Renal Pelvis

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2 : 19 — 25 (January) 1956

When penicillin and streptomycin solution were instillated to the renal pelvis of rabitts, they were good absorbed on the renal pelvis and were transferred into blood on the groups of the knoted ureter.

The absorptions powers of streptomycin and penicillin on the renal pelvis were stronger than on the bladder, although not so more than on the seminal vesicles.

Streptomycin were better absorbed than penicillin. On the groups of the non-knoted ureter, absorptions were little observed and only few dosis of them were transferred into blood.

When hyaluronidase were added to the solutions, antibiotics were more strongly

absorbed but they revealed for a some times after administrations.

Penicillin is influenced stronger than streptomycin to hyaluronidase on the absorptions powers of the renal pelvis.

When antibiotics were instillated to the renal pelvis with the degenerated renal tubules caused by knoting of the renal artery for 60–80 minutes, their absorptions were definitely inhibited.

These results seem to show that renal tubules have a significant role on the absorptions of renal pelvis of antibiotics.

An Experimental Urolithiasis by Oral Administration of Methyl Thiouracil

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2 : 26 — 29 (January) 1956

Male mice, body weight 15–20 g, have been fed on standard diet containing 0.5 % methiocil (4-methyl-2-thiouracil) during above three months.

After three months five mice were sacrificed, and three of them were found to have vesical calculi about the size of sesame.

Some animals died after five or six months, presented vesical calculi as large as the pea.

The crystalloidal component of these calculi was found to be methyl thiouracil only.

It seems that these calculi were produced owing to the administration of large dose of methiocil, decrease of solubility of the urine as the result of oliguria, acidic tendency of the urine and the difficult soluble nature of methiocil.

The renal pelves and ureters of the mice which produced urinary calculi presented apparent dilatation but the histological investigation of the kidney by H. E. staining, metachromasy and PAS reaction revealed no significant difference compared with the normal kidney.

A Method of Pelvic Phlebography ;

Pelvic Phlebography Via Femoral Veins

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2 : 30 — 34 (January) 1956

A method established by Dalali to visualize the pelvic veins by injecting opaque media directly into the femoral veins has been reported. It is capable of clearly visualizing the ramifications of the internal and external iliac veins and vesical plexus etc.

No reaction by this method has ever experienced.

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

Three Cases of Renal Tumors

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2 : 35 — 42 (January) 1956

I have reported the three cases of renal tumors in recently, especially, reported to pathological histologic study in regard to latest information. Two cases was clear-celld type (clear celles carcinoma), but one case was glanular cell carcinoma.

Traumatic Subcutaneous Rupture of the Kidney Associated with Retrocaval Ureter ; Report of a Case

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2 : 43 — 46 (January) 1956

1. A case of traumatic subcutaneous rupture of the right kidney of a boy aged 8 is reported.

2. The usefulness of excretory pyelogram in diagnosis of traumatic subcutaneous rupture of the kidney in children is verified.

3. Retrocaval ureter was found in the operation. There may be no causality in co-existence of traumatic rupture and retrocaval ureter.

Anesthesia of Urethra with Xylocaine Jelly

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2 : 47 — 52 (January) 1956

We used Xylocaine Jelly, one of the products of the Fujisawa Medical Industry Co., which had higher viscosity by adding CMC to the new local anesthetic, "Xylocaine"

We found that it had superior anesthetic effect to local Procaine, and sometimes was superior to sacral anesthesia by Procaine.

We did not recognized any general or local reaction at all.