HEMOSPERMIA

By

A. K. DATTA

Hemospermia is a rare condition. Galen was probably the first to recognise it. As the subject is relatively less discussed and the worried patients very often come to the Venereal Disease Clinics, it is worth recapitulating some of its aspects.

Hemospermia or hematospermia indicates presence of blood in the seminal fluid. Cases have been recorded by *Dalandeteric* (1813), *Demarquary* (1863), *Huges* (1894), *Lydston* (1894), *Jonathan Hutchinson* (1899), *Chute* (1903), *Kroner*, *Nelken* (1910), *Ashkar* and *Issa* (1935) and *Parker Weber*. *Parker* (1942) collected 28 cases from literature and added 5 of his own. To it 6 more can be added, one mentioned by an enquirer (B. M. J. 1940) and 5 recorded by *Weyrauch H. M.* and *Gass, H.* (1946) as mentioned by *Harkness* (1950). So far we are unable to collect any reference on this subject after (1950) till recently a paper *Yade, B.* 'on the study of hemospermia' in Acta Ural Jap, April 1963 which unfortunately is not available to us.

Out of about 20 thousand new cases during 1961–63 we have come across only 3 cases of clinical hemospermia which we therefore consider worthy of record.

Case 1.—M. A. C., Muslim, male, 28, single, clerk reported to us in January 1961 with the following ;

Premature ejaculation and partial loss of erection–9 years. Reddish semen and discharge of blood per urethra on defaecation–3 years.

Onset insedious. Gradually developing weakness, quick emission and partial loss of erection. Had some indigenous treatment without any effect. Since 1958 he is passing drops of frank blood per urethra on passing hard stool and also just before and after passing urine. Admitted in Dacca Medical College Hospital (1959) and was diagnosed as a case of " Hypernephroma right Kidney. " Operation was decided but abandoned due to reasons unknown. Upto that he had taken testoviorn 15 injections, few phials of Phosfomin and B. G. Phos, Streptomycin 15 injection etc. without any result. Came to Calcutta in May 1960 and was treated with Furadantin, autovaccine, non-specific protein therapy, laxative with practically no result. Habitually constipated.

Admits repeated sex contacts but no history of sore genitals, urethral discharge, rash or bubo.

On exam : Persistent pulse rate of 80 per minute.

Right testis slightly enlarged, not tender.

External piles present.

Received for publication on 31-12-63.

Reports of Dacca Medical College :

1. " Plain X'ray and I. V. pyelogram—Space occupying lesion right kidney which has obliterated the middle calyx and is also pressing the upper major calyx."
2. " Cystoscopic examination—No bleeding point except for slight oozing on the prostatic projection inside bladder that may be due to urethral curuncle or trauma caused by instrument Cystoscope."
3. " Cystogram—Bladder filled. No filling defect.

   Provisional Diagnosis—Painless hematuria (?) Hypernephroma of right kidney."

Investigations in Calcutta before he reported to us.

1. Urine—Occult blood positive R. B. C. present fair number.
2. Culture of urine—B. Coli isolated (before furadantin).
3. Seminal fluid—Reddish, volume 2 cc. sperms 102 mill/cc. R. B. C. present fair number, Pus cells plenty.

Investigations carried in V. D. indoor, Medical College Hospital, Calcutta,

P. R. : Prostate—enlarged slightly, firm, smooth, not tender, rectal mucosa free.

Seminal Vesicles—Palpable both side, firm, not tender.

Urine : Alkaline, phosphate trace, Pus cells 6-8 per field, R. B. C. 1-4 per field.

Urinary sediment—Gram's stain-N.A.D.
Acid fast stain-A.F.B. present.

Prostato Vesicular fluid : Reddish
Wet film (1/6 objective) Plenty of pus cells, discrete and in clumps.
Plenty of R. B. C.
No lecithin crystals, Prostatic corpuscles and epethelial cells few.
Sperms present most of them dead.

Gram's stain—Pus cells 10-12 per field.

Epethelial cells few. Secondary organisms a few.

Acid fast stain—A. F. B. not found.

Culture—Ordinary media-staph albus.
Special media for acid fast organism no growth.

Examination of Prostato Vesicular fluid repeated 10 days after and findings were the same plus acid fast organisms.

Seminal fluid—Reddish, Vol. 2.5 cc.
R. B. C. plenty, Pus cells 10-12 per field.
Sperms plenty.

Blood: S. T. S.—Negative
T. C.—6700 per cmm.
D. C.—Poly 60%, Lympho 33%, Mono Nil, Eosino 7%
R. B. C.—4.15 mill/cmm, Hb-13 Gm%
E. S. R.—7 mm 1st hour (Wester gren)

M. T.: 1/100000—6 mm
X'Ray chest:—N. A. D.
St. X'Ray Abdomen—N. A. D.

Urethroscopy: Anterior urethra normal except slight congestion at the bulb. Posterior urethra slightly congested and a tiny elevation on the roof middle of the prostatic urethra. A pea sized mucous bulging just above the internal urethral meatus blocking the view of urethroscope.

I. V. Pyelography: No opaque calculus seen in the Kidney, ureter and bladder. Normally functionating kidney. One of the upper minor calyces in the left side ill defined and shows incomplete out line. This is probably due to Kock's infection at the site.

Cystoscopy: Trigone of bladder congested. Bladder neck projection of the mucous membrane with slight hypertrophy and congestion.

Retrograde Pylography. Normal anatomy of the calycal system left side.

Catheterised specimen of urine left side. Greenish.

Culture. Ordinary media, Special media for A. F. B. } No growth

Unfortunately Guineapig inoculation was not done.
Sputum (few days after hemoptysis). A. F. B. Neg.

Treatment. Coagulant.
Sedative and decongestive.
Inj. Calcibronat 5 cc. I. V. every other day 6.
Inj. Reverin 1 vial IV every day 10.
Instillation of 5% Argyroll into urethra biweekly 8.

No Improvement.

During the period of investigation the patient had an attack of rigor, fever and a small bout of hemoptysis. He became all right with one or two days without any active treatment. Except that no loss of weight or rise of temperature during the period under observation. 2 months later he reported to be undergoing antitubercular treatment (Isonex and P. A. S.) outside for about 2 months without any result.

Case 2.—D. N. T., Hindu, male, married 15 yrs., Darwan reported with the following :—

1. Sterility
2. Reddish semen—6 wks.

He admits history of frequent extramarital contact but denies any history of sore genitals, urethritis, rash or bubo.

Reports of seminal fluid done outside-Volume 2 cc, reddish, Sperm 50,000/cc, most of them dead with abnormal heads.
R. B. C. plenty.

On Exam : No abnormality except mucoid urethral diseharge and slightly tender right epididymis.

Investigations : Blood S.T.S. Neg.
Urine—N. A. D.
Urethral discharge Gram's stain—G. N. D. resembling N. Gonorrhoeae.

Patient was put on Inj. P.A.M. 2 cc I.M. daily for 4 days, Calcibronat tablet one at bed time and Akalsol 2 tea spoonful twice daily. Urethral discharge persists even after 2 weeks which on Gram's Stain shows plenty of epethelial cells and few pus cells. Urine N. A. D.

Seminal fluid—(masturbation specimen)—normal colour
Pus cells—5-7 per field
Sperms scanty 80% dead
No. R.B.C.

P. R. Prostate—Slightly enlarged, firm, smooth, not tender, rectal mucosa free.
S. Vesicles enlarged, sausage shaped, fixed, firm, slightly tender.
Prostato Vesicular fluid—normal colour

Wet film (1/6 objective)—Pus cells 10-15 per field both discrete and in clumps
Prostatic corpuscles and epethelial cells few.
No. T. V.

Gram's Stain—Pus cells fair number, epethelial cells few.
Patient was treated successively with,

1. Inj. milk ĕ Iodine 10 cc I. m. biweekly 12.
   Firm Prostato Vesicular massage biweekly 1.
2. Inj. Streptomycin 1 G Im 7 days,
   Sulphamezathine 2 tabs. 4 times a day for 7 days.
3. Inj. Achromycin 100 mgm. b. d. for 6 days.

No Improvement.

Urethroscopy. Extreme congestion at the bulb and posterior part of urethra. Prominent veru. A small curved whitish elevation in the roof of about the middle of penile urethra (? soft infiltration)

Fever therapy with. I. V. T. A. B. + Sulphamezathine 2 tabs 4 times a day. Urethral discharge stopped.

P. R. (2 weeks after) Prostate & S. Vesicles same as before.
Prostato vesicular fluid Normal.
Seminal fluid —Normal colour.

He is still under observation.

Case No. 3. N. B., Hindu, male, 30, Single, Peon reported with the following :—

1. Blood stained seminal fluid
2. Constipation

} 8–10 months.

History of the sore penis with bubo right inguinal region one year back following an exposure. Excessive libido and masturbation.

On Exam : No abnormality detected.

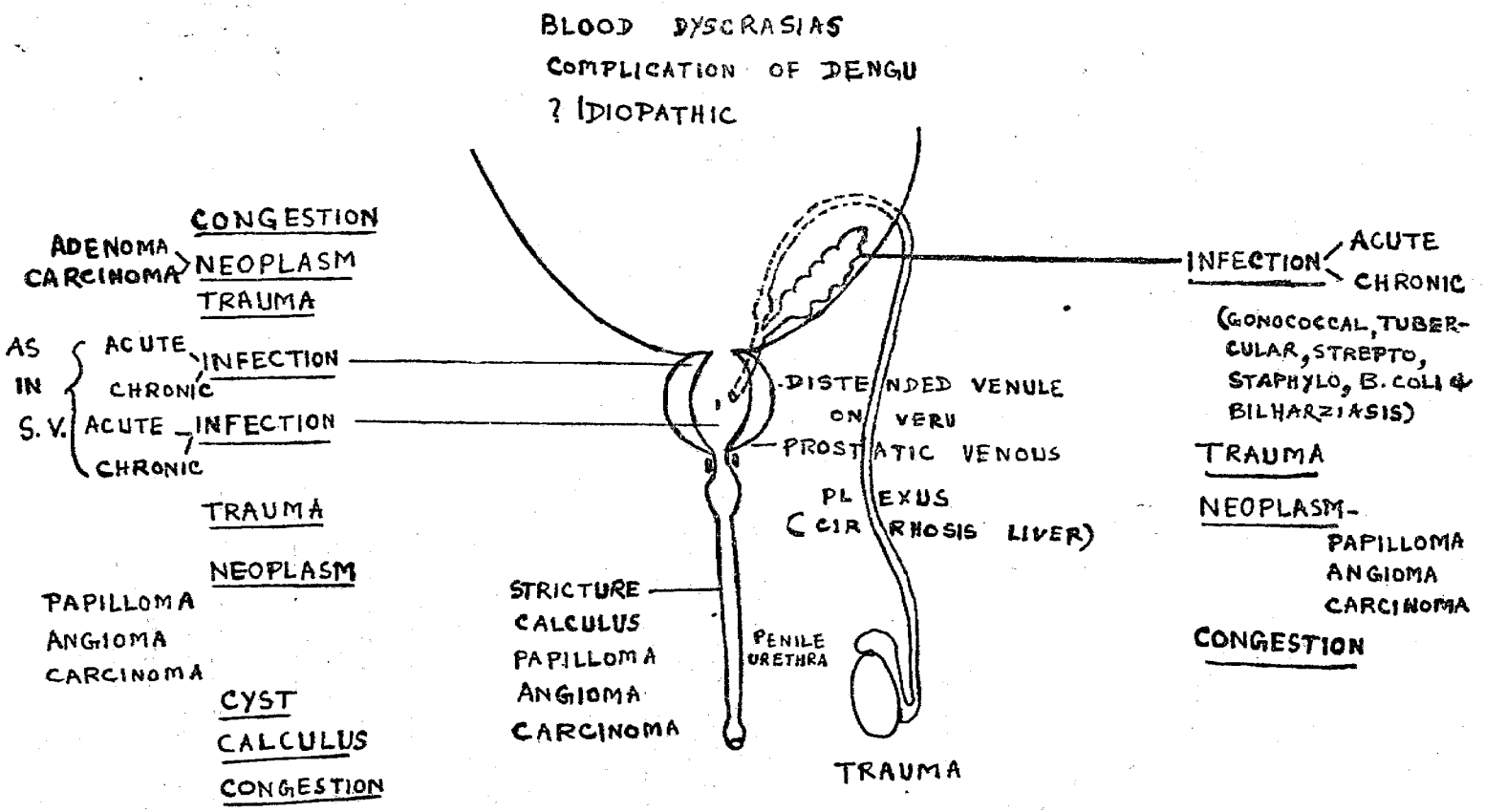
Investigations—Blood S. T. S. Neg.
Urine NAD
P. R. Prostrate slightly enlarged, firm, smooth, not tender.
S. Vesicls not palpable
Seminal fluid Rosy red, 3cc.
(masturbation specimen) R. B. C. plenty.
Stray pus cells

Urethroscoy: congestion of the whole of Posterior urethra extending upto mid penile region. Veru enlarged.

He was put on decongestive, sedative and laxative, nonirritating diet and sex rest for about 6 weeks. Examination of seminal fluid at the end of 6 weeks reveals normal colour and no R. B. C. under microscope. He is also under observation.

Discussion. Hemospermia in the first case was of prostato vesicular origin. The nature of acid fast organisms detected in the prostato vesicular fluid and urine could not be definitely established. The pathology of the mucous .projection just internal to shinter and the roof of the posterior urethra remains unknown (? Lymphocystic bodies as mentioned by PELOUZ). Local treatment could not be undertaken for risk of dissemination of tubercular lesion if any. No response to extensive treatment here and outside including anti-tubercular one indicates some, non-infective pathology. Hematuria was probably due to mucous projection in bladder.

The second one is a case of chronic Prostato-Vesiculourethritis of Gonococcal and non-Gonococcal infective origin. Hemospermia is due to Prostato vesiculitis and responded to P. A. M. Non Gonococcal element requires a series of trial. The combination of fever therapy and sulpha seems to have worked best. The condition of seminal vesicles remains the same even after extensive treatment probably due to perivesiculitis and adhesion with prostate.


BLOOD DYSCRASIAS
COMPLICATION OF DENGU
? IDIOPATHIC
CONGESTION
ADENOMA
CARCINOMA
NEOPLASM
TRAUMA
AS IN S.V.
ACUTE
CHRONIC
INFECTION
ACUTE
CHRONIC
INFECTION
TRAUMA
NEOPLASM
PAPILLOMA
ANGIOMA
CARCINOMA
CYST
CALCULUS
CONGESTION
DISTENDED VENULE ON VERU
PROSTATIC VENOUS PLEXUS
(CIRRHOSIS LIVER)
STRICTURE
CALCULUS
PAPILLOMA
ANGIOMA
CARCINOMA
PENILE URETHRA
TRAUMA
INFECTION
ACUTE
CHRONIC
(GONOCOCCAL, TUBERCULAR, STREPTO, STAPHYLO, B. COLI & BILHARZIASIS)
TRAUMA
NEOPLASM-
PAPILLOMA
ANGIOMA
CARCINOMA
CONGESTION

The third one is due to congestive condition of Prostate and Seminal vesicles. This is due to sex excess and easily clears up with routine treatment.

About one thousand males were referred to us by sterility clinic for investigations during the period 1961-63. Microscopical examinations of seminal fluid reveal presence of red blood cells in varying number in about 1% of cases who have normal looking seminal fluid with naked eye. These may be considered as subclinical or microscopical hemospermia. Most of these patients admit sex excess. Urethrscopic examinations of some of them show intense congestion of posterior urethra and the bulb with prominent veru. They are usually of short duration.

The colour of the ejaculated fluid may vary from rosy red to deep brown depending upon the amount of blood and whether it is fresh or old. Bright red indicates fresh bleeding. " Fresence of stale blood implies it has been lodged for period in the seminal Vesicles " (*Badenoch*, 1953). It is said that uniform red colour indicates vesicular origin and streaks with clots of blood indicate Prostatic origin. When the admixture occurs in prostatic urethra it is known as hemospermia spuria and Vera when it is in seminal vesicles.

The condition usually is of short duration but may be very chronic and for years. J. Hutchinson had a case of 24 years duration. It is usually a painless condition but may be painful in acute infection, trauma and in some cases of obstruction as for example by an impacted calculus. Painful blood stained semen in Tuberculous Vesiculitis has been mentioned by Ian laid. May be associated with hematuria and painful erections.

Prostato Vesicular congestion seems to be the commonest cause. With the advent of antibiotic the treatment of Gonorrhoea has become very satisfactory, complications rarer. At present Gonococcal Vesiculitis has yielded its place to certain extent to tubercular one. These three mostly occur in younger age group. Carcinoma of Prostate is one of the most important cause of hemospermia.

Schematic representation of different etiologic factors is attempted below.

Badenoch has mentioned that in majority of cases no pathologic lesion is found. It seems that by thorough historical, clinical, bacteriological, radiological and cysto urethrescopic examinations the etiologic factor can be established in most of the cases.

Removal of the cause is the treatment. Discussion with and assurance to the patient is one of the most important part of treatment. Cases where no cause is found, emperical estrogen therapy has been advocated with beneficial effect in some of them. Treatment should be continued for at least three months with suitable dosage as to suppress the activity of testis and seminal vesicles as suggested by Huggins and Mcdonald (Badenoch 1953).

SUMMARY

A short review regarding incidence and etiology of hemospermia attempted. Different aspects of etiology and clinical features have been discussed. Incidence of subclinical hemospermia mentioned. Discussion on general management with case report done.

ACKNOWLEDGMENT

I am grateful to the Superintendent, Medical College Hospital, Calcutta for permission to utilise hospital records for this publication.

I am grateful to Dr. Sourin Ghosh, F. R. C. S., Professor of Venereology and sexual disorder, Medical College, Calcutta for his guidance and also grateful to Dr. A. K. Chanda M. S., F. R. C, S. (Edin & Eng) for his encouragement and valuable suggestions.

REFERENCES

1. BADENOCH, W. ALEC (1953) Manual or Urology.
2. B. M. J. Nov. (1940) Correspondence.
3. HARKNESS, A. R. (1950) Non Gonococcal urethritis.
4. IAN IARD (1950)—Companion in surgical studies.
5. FELOUZE—Gonorrhoea in male and female
6. PARKER GEOFFREY (1942)—Proceedings of Royal Society of Medicine.
7. THOMSON-WALKER, J. (1958)—Genito Urinary Surgery.
8. WINSBURY-WHITE and FERGUSSON, J. D. (1961)—Text Book of Genito Urinary Surgery.
9. WILLIAM and MILKINE—Students Medical Dictionary.