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Gonococcal uveitis associated with threatened iris prolapse

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GONORRHEAL UVEITIS may occur in the course of a violent purulent conjunctivitis in adults as the gonococci are capable of penetrating the cornea. The other way by which gonococci gain entry into the cornea is endogenously, via the blood stream. The first is a rare event. The second was first associated by Brodie (1818) and Vetch (1820) to be due to gonorrhea. Sir William Lawrence (1830) was the first to describe the clinical pictu.e of a severe attack of iridocyclitis in the course of a systemic gonorrheal infection. Neisseria gonococci however was discovered by Neisser only in 1879, much after, the established association clinically, between gonorrhea and uveitis.

Although in gonorrhea, arthritis and uveitis are frequent, Griffith (1900) suggested that iritis might not only be a complication but also a late sequelae. Karsnitski (1897) Sidler – Huguenin (1911) and Velhagen (1937) isolated gonococci from the Anterior Chamber of a typical acute case of the disease.

Incidence of Iritis in gonorrhea varies with the author e.g. Gilbert 3% (1930) Yeld 8% (1901) and others like Goulden 45% (1914) while Zeeman 12% (1936). A survey in 1914 by the Institute of Ophthalmology London suggested gonorrhea as an aetiological factor of Iritis in less than 2% (Perkins 1961).

Time of Onset

Gonorrheal uveitis is exclusively a disease of males. The eyes are affected only when the disease has spread to the deep urethra and Iritis is then secondary to Chronic prostatitis or vesiculitis. It never occurs during the acute stage of anterior urethritis (Sidler-Huguein 1911 & Von Hippel 1917).

Uveitis usually occurs weeks or months after infection and usually follows other systemic involvement particularly joint. Also, there is no time limit as to when an attack or a relapse can occur subsequent to infection and a period of 5 – 10 or more years is quite common before the initial attack of iritis e.g. Kravitz (1936) – 60 years after original infection.

Iridocyclitis may be bilateral (Byers 1908) but this is not the rule.

Gonorrheal infections of uvea may present as follows:–

1. Suppurative Uveitis.
2. Simple Iritis.
3. Exudative Iridocyclitis.
4. Plastic Iridocyclitis.
5. Mild Iritis associated with endogenous conjunctivitis.
6. Posterior uveitis – rarely.

Case Report

History:

A young Malay man of 34 years was referred from a district Hospital for "Red Eyes" of 20 days duration, which had stubbornly not responded to antibiotic drops and ointment prescribed. Patient complained also of a foreign body sensation, extreme photophobia, epiphora and slight pain in both eyes.

Clinical Presentation:-

Patient was only able to open his eyes after repeated instillation of Amethocaine drops for about 5 Mins. So intense was the photophobia, that tears kept streaming down his cheeks when finally his upper lids were lifted.

Patient had VAR 4/60 VAL = 3/60. The Conjunctival congestion was both circumciliary and generalised. The strangest feature was the presence of two huge almost symmetrical *Iris Prolapses* into the already much thinned cornea (threatening perforation) well-tucked under the upper lids. (Photos 1 – 2). The right side measured 10mm × 3mm and left was about the same. In fact, these were only seen when the patient looked down. The *cornea* along the upper limbus was scarred and thinned out with Epithelial Erosions, otherwise no fresh Corneal Ulcers were seen. The Anterior Chamber had an Aqueous flare and cells in plenty. There were no Posterior Synechiae. The pupils were pulled upwards because of the adherence of the Iris to the Posterior Endothelial Surface above. No cells were seen in the Post Lental space. Fundus appeared normal. Ocular Tension could not be taken.

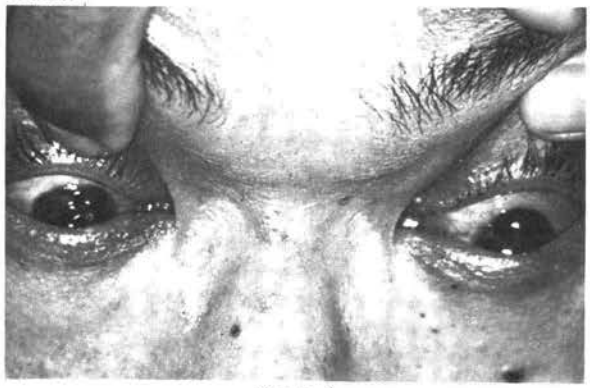

Photo 1
Both eyes showing Upper Limbal Threatened Iris Prolapse (with patient looking down.)

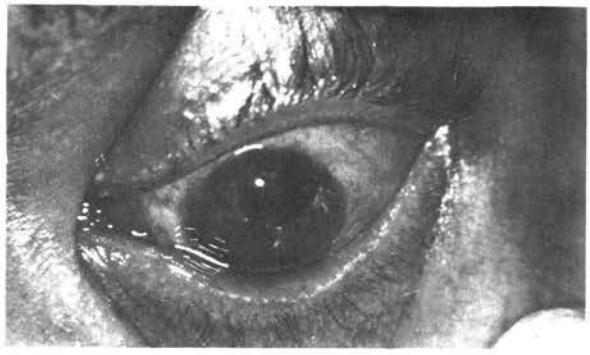

Photo 2. Left Eye
Magnified view of Upper Limbal Threatened Iris Prolapse.

Investigations & Management

Patient was admitted and treated with Gutt. Atropine and gutt. Chloromycetin initially.

1. A conjunctial smear proved negative for organisms.
2. Blood Picture Hb% = 14.8 gm%
   TWDL = PN 58 PE = 2
   L = 40 M = O B = O
3. ESR = 9mm.
4. Urine examination showed Pus cells 25 – 30/ cu. mm.
5. Urethral smear then ordered, proved positive for gonococci.
6. With the latter finding other investigations like VDRL and FTA Absorption – Test were ordered too. Both proved to be positive.

Treatment was then changed to gutt. Penicillin and Systemic Procaine Penicillin 300,000 IU-IM daily was started. By the 13th. day after admission, patient was less photophobic but eye congestion persisted with Anterior Uveitis.

An Aqueous Tap was done on the 14th day on the left eye and at the same time 5000 IU of Crystalline Penicillin was given intraocular. The Aqueous Tap proved fruitful for within 24 hours, the Laboratory Technician exclaimed "Luxuriant growth of gonococci" from the Aqueous Humour.

At this juncture, the opinion of the Venereologist was consulted as to therapy and his advice was to increase the Aqueous levels of Penicillin by this therapy:- (1) Inj. Proeaine Penicillin G (Hoescht) Daily 6 Mega Units to be given as 3 Mega Units Deep IM in each gluteal region, for 2 consecutive days. (2) BENEMID 1 Tab. 8th. Hourly for 48 hours.

Clinical Progress:

By the 4th day after completion of this therapy or 21st. day after admission, the progress of the patient could be said to be remarkable or dramatic. Patient was only slightly photophobic. By the 10th. day after this therapy the Iris Prolapse in both eyes had recessed.

The Cornea was thinned out but there was no more bulge produced by the underlying Iridic Tissue. The pupils still remained updrawn, for there was still adherence of the iris to the endothelium.

Patient was discharged just short of two months after admission. Both threatened Iris Prolapse and Corneal Perforation had responded beautifully to massive Penicillin Dosage Therapy. (Photos 3, 4 & 5).

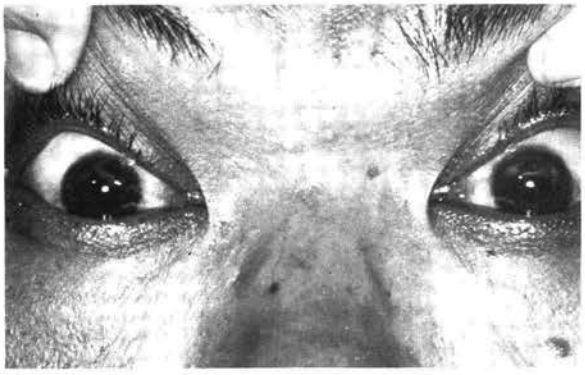

Photo 3. Both Eyes
Upper Limbal Corneal scarring and recessed Iridic Tissue.

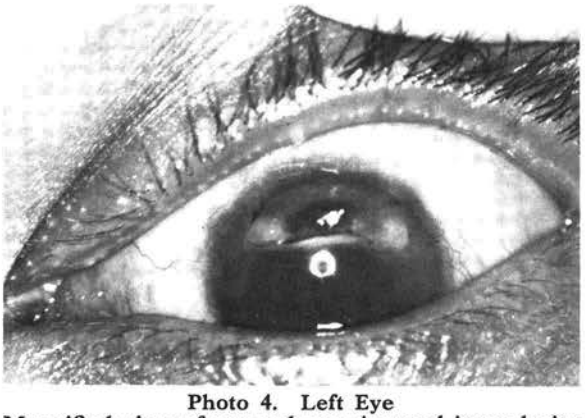

Photo 4. Left Eye
Magnified view of corneal scarring and irregularity and recessed Iridic Tissue.

Discussion:-

This case is interesting from the unusual mode of presentation of gonococcal uveitis as threatened Iris Prolapse with Thinned Cornea.

1. The thinned out cornea suggests past Interstitial Keratitis due to Acquired Syphilis and the positive VDRL and FTA – Absorption test proves concommitant Syphilis.

2. Also the Positive Agueous Tap for Gonococci from a case of "Chronic gonococcal Urethritis". This was in retrospect after patient admitted his past history of exposure to V.D. 17 years ago. Following that he had urethritis, which was treated with injections for a week. 2 months prior to patient's present hospitalisation he had Urethitis (without re-exposure to V.D.) and was treated effectively according to him. 4 days after his present hospitalisation he again had urethritis.

3. The Dramatic Response to high dosage IM Procaine Penicillin totalling 12 Mega-Units within 48 hours combined with oral Benemid to delay excretion rate.

4. The spontaneous recession of Iris into the Anterior Chamber, and Cornea into its normal convexity though with scarred and thinned out areas and some vascularisation in upper limbus. The monthly follow-up reveals no active uveitis.

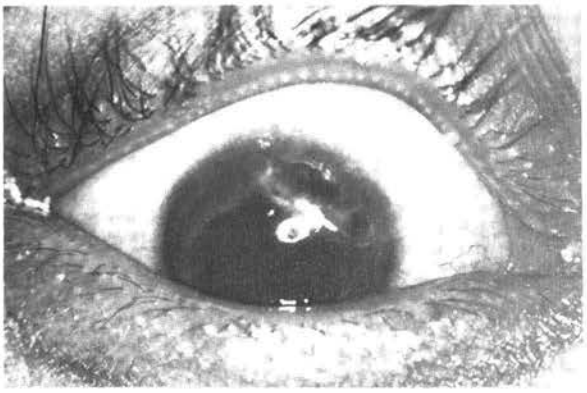

Photo 5. Right Eye
Magnified view after Treatment.

This case is worth reporting because of the absence in Ophthalmic literature of this particular complication, presenting as Threatened Iris Prolapse secondary to Gonococcal Uveitis.

Summary:-

This is a case report of Threatened Iris Prolapse in a case of Bilateral gonococcal Uveitis with Chronic Urethritis. Its dramatic response to systemic High Dosage Penicillin is also commented on.

Reference: Duke Elders Volume IX.

Acknowledgement:-

Many thanks are due to Dr. Hj. Mohd. Nor bin Marahakim, (Senior Consultant Ophthalmologist, General Hospital, Kuala Lumpur) for permission to publish this case.