COWPER'S GLANDS AND DUCTS IN URETHROGRAPHY

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SUMMARY

Urethrographic appearance of rarely seen Cowper's glands and ducts are demonstrated. Its anatomy should be recognised to distinguish it from pathological conditions.

Keywords: Cowper's Gland Urethra, anatomy, Urethra, stenosis, Urethra, radiography

INTRODUCTION

Opacification of both Cowper's glands and ducts is a rare finding in urethrography.[1] Its demonstration almost always indicates an abnormality in the posterior urethra or posterior aspect of the bulbous urethra. Conversely, its visualisation may be a diagnostic pitfall, and may lead to misinterpretation.

We present a case delineating both Cowper's glands and ducts, to illustrate its anatomy so as to help differentiate it from pathological conditions.

CASE REPORT

JAK, a 52 year-old Malay man, presented in July 1987 with a complaint of dribbling of urine of one week's duration. He gave a history of urethral injury during childhood. Over the past seven years, he had been admitted several times for endoscopy and dilatation of his urethra. Two stage urethroplasty was pertormed in 1981. He had an episode of epididymo-orchitis in 1986.

Retrograde urethrography followed by a micturating urethrogram revealed a stricture in the posterior aspect of the bulbous urethra. The normal symmetrical cone shape of this part of the urethra described by McCallum (1979) was uneven.[2] The anterior urethra was dilated and its outline irregular, consistent with previous instrumentation and infection.

During injection of contrast media, both Cowper's ducts were noted to fill. The left Cowper's duct appeared mildly irregular (Fig 1). The typical frond-like pattern of both Cowper's glands was demonstrated, with the right gland appearing slightly bigger (Fig 2). Both ducts and glands drained almost immediately once injection ceased.

DISCUSSION

Recognition of the anatomy of tbe uncommonly demonstrated Cowper's ducts and glands is useful. Opacification of the Cowper's duct alone, is seen as a small wisp of contrast media adjacent to

Figure 1
Wisp-like left Cowper's duct is outlined by contrast.

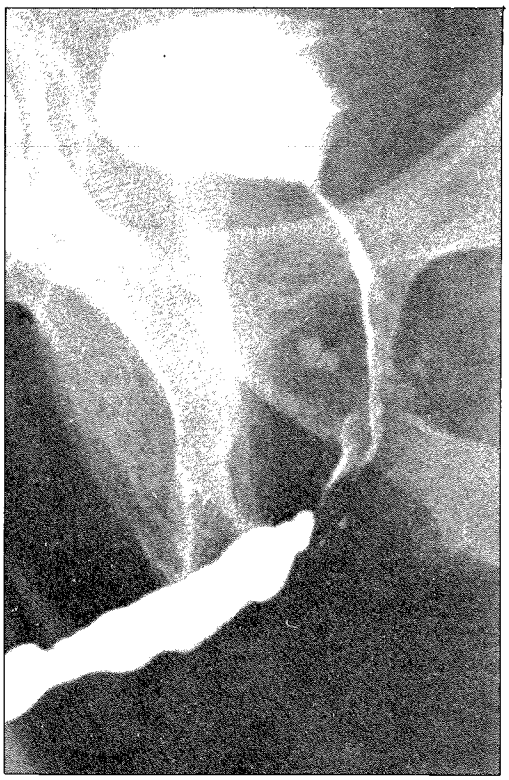

Figure 2a Oblique projection. Both Cowper's glands are outlined. Note the loss of the normally symmetrical tapering bulbous urethral conus.

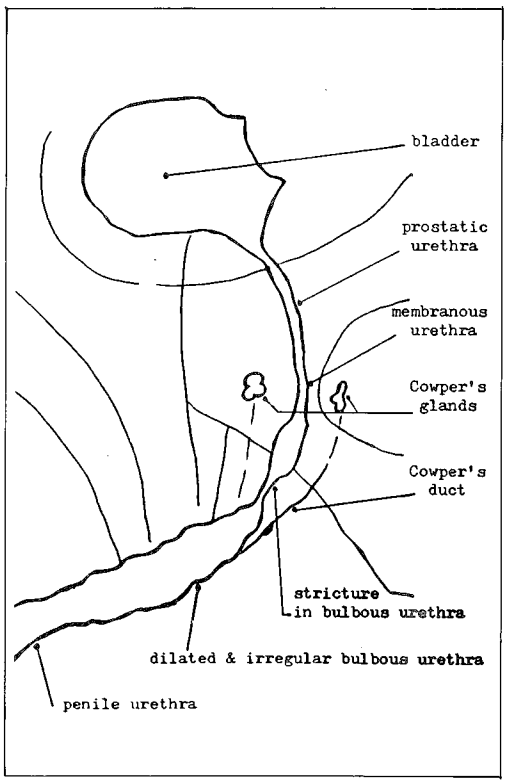

Figure 2b Diagram illustrating the anatomical features of Figure 2a.

the inferior aspect of the bulbous urethra into which it drains.[2] This could be mistaken for a fistulous tract or extravasation of contrast into the penis. The misdiagnosis of extravasation in a patient with a stricture following trauma or instrumentation may lead to unnecessary medico-legal implications.

The typical frond-like appearance of Cowper's gland should be recognised. It is situated within the urogenital membrane just proximal to the conus of the bulbous urethra[3]. It should be distinguished from filling of prostatic ducts and ejaculatory ducts, both of which are situated more proximally. Seminal vesicles may also be demonstrated even more proximally. These structures can be differentiated from Cowper's glands by anatomical loation and absence of frond-like pattern.

On the other hand, opacification of the Cowper's glands and ducts hardly ever occurs in normal subjects. Its demonstration therefore should alert the radiologist to look more carefully for a stricture or other urethral abnormality especially if not obvious at first instance.

ACKNOWLEDGEMENTS

We would like to thank Dr Tan Kim Ping, Head of the Department of Diagnostic Radiology, Tan Tock Seng Hospital for his encouragement; and Angeline Yue for her secretarial assistance.

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