REFRESHER COURSE FOR GENERAL PRACTITIONERS

SCROTAL SWELLINGS

BY

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Scrotal swellings are commonly encountered in general practice, and a preconceived scheme for clinical examination is a practical help to accurate diagnosis. Thus the clinician must first decide whether the swelling is passing into the scrotum from above or whether it is entirely contained in the scrotum. If the latter, is the swelling cystic or solid, and, if solid, is it in the epididymis or the testicle or are both the epididymis and testicle involved? With these points in mind, the following simple scheme comprises a summary of scrotal swellings:

Swellings from Above

These are usually easy to recognize and can be dismissed in a few words. Thus an inguinal hernia may be reducible either by the patient or by the clinician, preferably with the patient recumbent. If the hernia is irreducible it can easily be palpated as it emerges from the external ring on its way to the scrotum.

A varicocele is usually of long standing and classically resembles a "bag of worms." Should the varicocele be of recent origin the possibility of compression of the spermatic veins by a renal tumour must be borne in mind.

A congenital hydrocele is one in which the processus vaginalis persists, so that peritoneal fluid can escape along the inguinal portion of the scrotal sac. Pressure on the scrotal part of the hydrocele causes a bulge along the inguinal canal, but fails to reduce the fluid owing to an "inverted ink-bottle" effect at the internal ring. However, the history is typical in that the scrotal swelling is smaller in the morning, as during recumbency some of the fluid seeps back into the peritoneal cavity along the processus vaginalis. Tapping such a hydrocele is useless, as more fluid will trickle down from the peritoneal cavity and so cause recurrence of the swelling; this it can be cured only by excision.

Cystic Swellings

Spermatocele.—This is a retention cyst in a vas efferens. The nature of the obstruction is open to conjecture, but it is congenital, or traumatic, or inflammatory. Typically, a young adult presents himself with a globular painless cystic swelling situated above the testicle. Patients may even flatter themselves that they have been blessed with an additional testicle: in fact, a mediaeval Pope once granted an applicant permission to marry two wives because he had three "testicles." A spermatocele varies in size from a pea to a plum and only exceptionally continues to enlarge after this dimension is reached. The patient should be advised to ignore the cyst; but, if it worries him, aspira-

tion is easily performed. The fluid thus obtained contains dead and dying spermatozoa and resembles barley water in appearance.

Cyst of the Epididymis.—This condition is due to cystic degeneration occurring in the paradidymis, or organ of Girdaldès. These vestigial remains are analogous to the tubules (organ of Rosenmüller) which sometimes persist in the broad ligament and give rise to a cyst in that structure. A cyst of the epididymis may closely resemble a spermatocele, but two points may help the clinician in distinguishing the two conditions. A "cyst" of the epididymis is actually a collection of cysts, and therefore, on careful palpation, more closely resembles a bunch of small grapes rather than a single grape. Moreover, congenital conditions are often bilateral; therefore cysts of the epididymis may present symmetrically, whereas it would be a remarkable coincidence if a vas efferens on both sides became obstructed.

The differential diagnosis of these two conditions has a practical application in their treatment. As already mentioned, a spermatocele is a single cyst and therefore may very properly be treated by aspiration (although cure is not guaranteed), but it is manifestly futile to attempt to empty a bunch of cysts by this method. If necessary a cyst of the epididymis is removed by careful dissection so as to preserve the spermatic vessels, and it will be noted that the contained fluid is crystal clear.

Hydrocele.—Acquired hydroceles are either primary, or secondary to some underlying conditions. A *primary, or idiopathic, hydrocele* is probably the commonest scrotal swelling. It is easily diagnosed in that the cystic swelling surrounds the testicle, and, unless the wall is thickened or, very exceptionally, calcified, transillumination is obvious. Repeated tapping causes some oozing into the sac, and organization of blood clot may increase the thickness of the sac so that it eventually diminishes in translucency. As mentioned below, if the hydrocele is large enough to prevent adequate examination of the testicle it should be tapped so that any underlying pathological condition can be recognized. Repeated tapping may keep a hydrocele under control, but excision of the sac is a simple procedure which guarantees a cure. *Secondary hydroceles* are due to some pathological condition of the testis or epididymis. In most cases only a small quantity of fluid is present, so that the diagnosis is not unduly obscured. However, there is one condition in which a secondary hydrocele may be of such size that the underlying testicle cannot be palpated and the unwary clinician may diagnose a primary hydrocele and assume that the testicle is normal. Thus the increasingly rare gumma may present itself under these conditions, and it should be the rule that when a middle-aged patient presents himself with a hydrocele large enough to obscure the testicle the fluid should be withdrawn and the condition of the testicle assessed by an experienced surgeon.

Solid Swellings

Epididymis.—Tuberculous infection is a not uncommon cause of epididymal enlargements. If the disease progresses the testicle itself may eventually be destroyed, but it rarely increases in size. In the early stages the epididymis is firm in consistency and irregular in contour—commonly known as "craggy." The condition is comparatively painless, so that the patient may ignore it until an abscess erodes the skin and the discharge therefrom impels him to seek medical

advice. Further clinical examination may reveal a "beaded" vas due to submucous tubercles in the duct, and on rectal examination tuberculous nodules are commonly palpated in the prostate or seminal vesicles. Needless to say, a comprehensive examination of the patient is essential in order that appropriate treatment may be applied to other regions, notably the kidneys and lungs, which may be similarly affected. In the early stages many cases respond well to streptomycin, but if sinuses occur epididymectomy or orchidectomy will be required.

Testicle.—Enlargement of the body of the testis is due to either a gumma or neoplasm. *Gummata* are now rare, and for that reason are all the more apt to be forgotten. As already mentioned, a gumma may be concealed by a hydrocele. It presents itself as a smooth and entirely painless swelling. The absence of pain is due to replacement

Teratoma of the testicle. The patient succumbed with pulmonary metastases. (From R. J. McNeill Love's *Minor Surgery*, by permission of H. K. Lewis and Co.)

of normal cells by fibrous tissue. If the gumma breaks down it becomes adherent to the anterior surface of the scrotum and may eventually erode through the skin. If a gumma is suspected a clinical examination of the patient will probably reveal other evidence of tertiary syphilis, notably one of the stages of chronic superficial glossitis (especially leucoplakia), perforation of the hard palate, scarring of the soft palate, or evidence of previous subcutaneous gumma in the form

of silvery, supple, and serpiginous scars, classically likened to "tissue paper," and which are commonly found on the thighs and upper part of the legs. Recent gummata readily respond to antisyphilitic treatment, but if the testicle has been destroyed and replaced by fibrous tissue then excision is advisable.

Excluding curiosities, the two malignant diseases affecting the testis are seminoma and teratoma. A *seminoma* is a rapidly growing carcinoma of the seminiferous tubules. It sooner or later becomes irregular in shape and consistency, owing to local areas of degeneration and haemorrhage. Dissemination is mainly by lymphatics, and para-aortic lymph nodes in the epigastrium are commonly involved, as it is at this level that the testicle develops before it slides down into the scrotum. Fortunately a seminoma is radio-sensitive, and modern treatment consists in a high castration and deep x-ray therapy to the regional lymph nodes. A *teratoma* may be present for years as a firm, globular swelling (formerly known as fibrocystic disease), but in due course malignant changes supervene as shown by recent increase in size (see Fig.). Its consistency is usually firmer than that of a seminoma, and the history of a previous longstanding swelling also helps to distinguish the two conditions. This is of prognostic importance, as the malignant teratoma disseminates by the blood stream, notably to the lungs. Also, it is comparatively radio-resistant, so, if dissemination has occurred, the prognosis is hopeless. Teratomata at any stage must be removed immediately, in the hope that dissemination has been forestalled.

Testicle and Epididymis.—Acute gonococcal epididymo-orchitis would be but a memory if patients sought early treatment. Acute, subacute, or chronic epididymo-orchitis may occur in connexion with infections of the urinary tract,

especially a low-grade cystitis associated with prostatic obstruction. Occasionally, epididymo-orchitis occurs for no discoverable reason, and this is attributed either to a haematogenous infection or to regurgitation of urine along the vas deferens. This condition is said to occur when the patient has made some strenuous physical effort while the bladder was distended. In severe cases the patient should be confined to bed for a few days with support to the scrotum and kaolin poultices applied.

Finally, there is one condition which may closely resemble some of these already mentioned, the physical characters of which vary according to the stage at which the patient is seen. A *haematocoele* is commonly due to a blow which the patient is unlikely to forget, and, although the swelling somewhat resembles a hydrocele, the history of injury and lack of transillumination settle the diagnosis. Evacuation of the blood through a small incision at the neck of the scrotum is prudent, otherwise the subsequent clot will require months to absorb and haematogenous infection may be a tiresome complication. Curiously enough, a haematocoele can occur quite insidiously and in this case errors of diagnosis are likely, as the patient may not seek medical advice until the testis is surrounded by clotted blood. There is no history of injury and the physical signs closely resemble those of a seminoma. To emphasize this point, my former chief, Russell Howard, who was surgeon to the London Hospital, never tired of telling students that he had, after careful consideration, wrongly diagnosed three successive cases. As with any condition in which malignant disease cannot be excluded, exploration is essential. If a recent haematocoele is discovered the blood is evacuated. In later stages organization of clot will compress the spermatic vessels and cause testicular atrophy, so excision of the tunica vaginalis, including the clot and testicle, removes a useless encumbrance.

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