

Torsion of the testis revisited

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INTRODUCTION

Torsion of the testis is a well known entity having been first described in detail in 1840. To establish if the management of torsion of the testis has changed in recent years we have carried out a retrospective review of cases presenting to three teaching hospitals and two district general hospitals in Northern Ireland over the three years to 1985.

METHODS

Cases of testicular torsion, presenting to the Belfast City Hospital, Royal Victoria Hospital, The Royal Belfast Hospital for Sick Children, Daisy Hill Hospital and the South Tyrone Hospital over three years to 1985 were reviewed. A total of 66 cases was identified from theatre log and hospital activity analysis. Information was obtained from the operative notes, in-patient charts and routine follow-up appointments.

RESULTS

Torsion of the testis occurred in 66 cases. Ages ranged from 4 to 30 with a mean age of 16 years. The time from onset of pain to surgery ranged from 3 hours to 2 weeks with 30 (45%) operated on within 8 hours (Table). Factors responsible for an operation after this time were late presentation in 19 cases, mis-diagnosis in 15 and delay in subsequent management in two. Quality of result was based on operative findings and testicular size at follow-up appointment: 39 patients were felt to have had a good result and 27 (41%) either required orchidectomy at the

TABLE

Data on management and result in 66 cases of torsion of the testis, 1982–85

Category	Time to operation	Number	Result	
			Good	Bad
Good management	0–8 hr	29	27	2
	> 8 hr	19	8	11
Mis-diagnosis	0–8 hr	1	1	0
	> 8 hr	15	1	14
Mis-management	0–8 hr	0	0	0
	> 8 hr	2	2	0
Total		66	39	27

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time of exploration or subsequently developed testicular atrophy. Mis-diagnosis resulted in delay in appropriate management in 14 (52%) of the 27 with a bad result, and two of the patients who had a favourable outcome were also mis-diagnosed initially. Only two (7%) of those with a bad result were operated on within eight hours or less, compared with 28 (72%) of those with a good result; a good outcome was also obtained in 11 patients operated on after eight hours.

Of the 16 cases who were mis-diagnosed, epididymo-orchitis was originally diagnosed in seven, non-specific scrotal pain in three, non-specific abdominal pain in two, and appendicitis, constipation, testicular swelling and torsion/epididymo-orchitis in one each. Abdominal or loin pain was the presenting complaint in 16 (24%) patients. Torsion occurred in three cases of undescended testis which were all diagnosed as strangulated herniae but not classified as mis-diagnosis.

DISCUSSION

The anatomical abnormalities underlying torsion of the testis are well described, as is the fact that epididymo-orchitis is rare in adolescent males. We found torsion was initially diagnosed as epididymo-orchitis in 16 of 66 cases, leading to delay in appropriate management and contributing to the loss of 14 testicles. These data show a lower rate of mis-diagnosis than that reported by Chapman and Walton¹ but a similar rate of testicular loss.

Survival of the germinal elements is unlikely beyond six hours of complete ischaemia, and survival after this time is probably related to incomplete or intermittent vascular occlusion.² The case for urgent exploration of young males with acute scrotal pain, with or without abnormality on examination, is well established.³ This review shows that lack of awareness of the cause of scrotal pain in young males is still a problem, and underlines the importance of examining the genitals in any young male with abdominal pain. Prompt exploration should still be undertaken even after eight hours. Recently attempts have been made to improve pre-operative diagnosis by means of computer-aided diagnosis and radio-isotope scans.⁴ However, urgent hospital referral and subsequent exploration in young males with scrotal pain should remain a priority, especially if the risk of sympathetic orchidopathia in the contralateral testis were substantiated,⁴ although recent data suggests that an abnormality of spermatogenesis precedes the episode of torsion.⁵

In summary, this review indicates that the incidence of mis-diagnosis in cases of torsion remains unacceptably high occurring in 24% of cases reviewed, contributing to a 41% rate of testicular loss.

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REFERENCES

1. Chapman RH, Walton AJ. Torsion of the testis and its appendages. *Br Med J* 1972; 1: 164-6.
2. Burton JA. Atrophy following testicular torsion. *Br J Surg* 1972; 59: 422-6.
3. Cass AS, Cass BP, Veeraraghavan K. Immediate exploration of the unilateral acute scrotum in young male subjects. *J Urol* 1980; 124: 829-32.
4. Williamson RCN. The continuing conundrum of testicular torsion. *Br J Surg* 1985; 72: 509-10.
5. Anderson JB, Cooper MJ, Thomas WEG, Williamson RCN. Impaired spermatogenesis in testes at risk of torsion. *Br J Surg* 1986; 73: 847-9.