

An Unusual Infected Hydrocele —A case report—

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Of acute scrotal lesions in the neonates, cases needing emergent exploration are quite rare and differential diagnosis of them is not easy. Only a few cases of inflamed hydroceles occurring in young boys have been reported to have been caused by bacterial infection in the literature. We couldn't find any case concerning simultaneous bacterial infection in urine and hydrocele by the same organisms.

We present an unusual case of infected hydrocele in a neonate with bacteriuria.

Key Words : Infection, Hydrocele, Bacteriuria, Neonate.

INTRODUCTION

Erythematous, edematous, and non-compressible tender scrotal mass is usually a surgical emergency in children but is not frequent in neonates. Of inflamed hydroceles meconium induced periorchitis has been reported infrequently and hydroceles infected by bacteria have been reported only in a few cases in young boys(Waldbaum and Green, 1973; Jones and Deeths, 1975; Cos et al., 1982; Forouhar, 1982; Kenney et al., 1985; Dehner et al., 1986; Kutin et al., 1986; Ring et al., 1989). Furthermore, we couldn't find any report concerning the simultaneous infection by the same organism in urine and hydrocele in the literature.

We present a case of hydrocele infected with the same organism as that causing bacteriuria in a neonate.

CASE

An 11-day-old newborn was the result of a 40 week-gestation and normal spontaneous vaginal delivery with a birth weight of 3.5 Kg. The patient passed meconium on the first day of life, tolerated feeding and was well.

On the day of admission, he presented with an erythematous enlargement of the left scrotum and irritability for one day. His parents denied any scrotal abnormalities on routine post-natal examination. The body temperature was 37.4°C. The firm and enlarged scrotum didn't transmit light. The right scrotum was normal. CBC revealed a WBC of 31,700/mm³. Urinalysis showed 0-1 RBC/HPF and 3-4 WBC/HPF. This lesion was compatible with testicular torsion or abscess by testicular scan(Fig. 1). Upon opening the parietal tunica vaginalis at exploration a dark greenish mucus tinged brown fluid flowed out. The testis and epididymis were grossly normal. We couldn't find any communicating channel between the scrotum and the abdominal cavity because there was so severe inflammatory change around the hydrocele sac. Urine grew *E. Coli* over 10⁵ colonies/ml and hydrocele fluid also grew *E. Coli*. In tissue pathology, inflammatory cells

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Fig. 1. Testicular scan showed decreased uptake in the infero-medial portion of the left scrotum.

were severely infiltrated in the hydrocele sac and its debris but were scant in the epididymis and testis tissue without pyogenic foci. He was discharged on the seventh postoperative day on oral antibiotics. He was well at 3-month followup.

DISCUSSION

Infection of hydrocele (pyocele) has been recognized for a long time but it occurs rarely. There are three mechanisms of bacterial contamination on a hydrocele; 1) hematogenous seeding of the serosal lining; 2) secondary infection of a hydrocele following pyogenic infection of the testicle, epididymis, or one of their appendages; 3) seeding from an intra-peritoneal source through a patent processus vaginalis, being most common for infected hydroceles in children (Kutin et al., 1986). The infecting organisms reported in the literature were *E. Coli*, *Staphylococcus aureus*, *Staphylococcus epidermidis*, enterococci, and paracolon bacilli (Waldbaum and Green, 1973; Jones and Deeths, 1975; Cos et al., 1982; Kutin et al., 1986). Of these children with pyocele the sources of bacteria were unknown in 4 cases and the other 2 pyoceles occurred just after appendectomy.

Among acute erythematous scrotal swellings, we

should differentiate carefully among torsion of the spermatic cord, acute epididymitis, orchitis, incarcerated inguinal hernia, torsion of the appendix of the testis or epididymis, meconium hydrocele, and others. In our case, although there was no evidence of meconium in tissue pathology, the greenish mucus tinged brown fluid may suggest that it is caused by seeding of infected meconium into the processus vaginalis. But we are still unsure as to how the organisms growing in urine could get to the hydrocele without peritoneal irritation or pyogenic foci in the testis and epididymis.

Ultrasonography is highly accurate in distinguishing normal from abnormal scrotal contents and in separating testicular from extratesticular masses and may be helpful in the differential diagnosis of the painful scrotum especially with color flow Doppler (McAlister and Sisler, 1990). But there is no unique method for the differentiation of scrotal lesions. Furthermore, it is particularly difficult in neonates. So, if diagnosis is doubtful, exploration should be undertaken even though the less possibility of non-surgical lesions must be considered.

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