Xanthogranulomatous Orchitis after Blunt Testicular Trauma Mimicking a Testicular Tumor: A case Report and Comparison with Published Cases

Shimpei Yamashita,* Hidetoshi Umemoto, Yasuo Kohjimoto, Isao Hara

Keywords: testis; testicular tumor; trauma; xanthogranulomatous inflammation.

Xanthogranulomatous orchitis has been reported to be an extremely rare inflammatory change caused by infection and is difficult to distinguish from testicular tumor. We report a 28-year-old man who presented with a lump in his left testis after a blunt testicular trauma. Based on a series of imaging tests, we suspected benign tumor such as epidermoid cyst and performed tumor enucleation (testis-sparing surgery) on the patient. Histopathological findings showed xanthogranulomatous orchitis. It is assumed that xanthogranulomatous orchitis in this case was caused by blunt testicular trauma and this is the first successful case of xanthoglanatomatous orchitis in salvaging the testis.

INTRODUCTION

Xanthogranulomatous inflammation is one form of chronic inflammation characterized by a cellular infiltrate of lipid-laden macrophages. It is considered to be mainly caused by ascending or hematogenous infection, however clear pathogenesis is still unknown. In the genitourinary system, xanthogranulomatous inflammation is commonly observed in kidney, bladder and prostate. It can also occur in the gall bladder. Xanthogranulomatous orchitis (XGO) is a rare disease and, to our knowledge, only 22 cases have been reported to date. We present a case of XGO after blunt testicular trauma and compared with the published cases.

CASE REPORT

A 28-year-old man was hurt when his left testis was pinched in between the bicycle saddle and his left thigh. He had felt a dull pain in his left testis after the trauma, and a month later, he noted a lump in his left testis and visited our department. There was no history of urinary tract infection or urolithiasis. Physical examination revealed a thumb head size induration in his left testis. Complete blood count and testicular tumor markers were within normal ranges and urinalysis was normal. Various imaging tests, such as ultrasound, computed tomography and magnetic resonance imaging, showed a round tumor with distinct boundary between the tumor and the normal testicular tissue in his left testis (Figure 1). The right testis was normal. Since we suspected benign tumor such as epidermoid cyst in this case, we tried to enucleate the tumor to preserve the testis. The tissue was easily separated from the normal testis. The surgery was completed once the tumor was

Figure 1. Magnetic resonance imaging showed a round tumor with distinct boundary between the tumor and the normal testicular tissue in the patient’s left testis. (a) T1-weighted image. (b) T2-weighted image.
Figure 2. Foamy macrophages accompanied by lymphocytes and plasma cell infiltration. HE X 100.
Also, the patients underwent inguinal radical orchiec-
tomy because it was difficult to rule out the possibili-
ty of malignant testicular tumor. However, although it
was a focal-type XGO in the present case, the patient
was initially diagnosed with epidermoid cyst, and was
arranged to undergo tumor enucleation, also known as
testis-sparing surgery. One focal-type XGO patient was
reported to have underwent radical inguinal orchiecto-
tomy due to multiple tumors in his testis(8). Therefore, to
the best of our knowledge, this is the first successful
case of XGO in salvaging the testis. The present case
suggests that it is highly challenging to distinguish fo-
cal-type XGO from epidermoid cyst, which has rela-
tively high generating frequency among benign tumors
in the scrotum, based on radiological findings.

CONCLUSIONS
The present case suggested that trauma could cause
xanthogranulomatous inflammation. As there is a focal
type of XGO, it is therefore difficult to clearly differen-
tiate it from epidermoid cyst. Hence, if epidermoid cyst
is suspected, noting the possibility of a focal type of
XGO and performing testis-sparing surgery should be
taken into consideration.

CONFLICT OF INTEREST
None declared.

REFERENCES
1. Wiener LB, Riehl PA, Baum N. Xanthogranulomatous epididymitis: a case
2. Al-Said S, Ali A, Alohaidy AK, Mojeeb E, Al-
   Naimi A, Shokeir AA. Xanthogranulomatous
   orchitis: review of the published work and
   Xanthogranulomatous pyelonephritis
   presenting as a pseudotumour. Can Urol Assoc
4. Chung MK, Seol MY, Cho WY, Seo HK, Kim
   JS. Xanthogranulomatous cystitis associated
5. Matsumoto T, Sakamoto N, Kimiya K, 
   Kumazawa J, Miyazaki N, Hasegawa Y. Nonspecific
6. Reyes CV, Jablokow VR, Reid R. Xanthogranulomatous cholecystitis: report of
7. Murayama K, Katsumi T, Matsushita S, 
   Yoneshima Y, Watanabe K. [A case of
   xanthogranulomatous pyelonephritis probably
   derived from a renal injury]. Hinyokika Kiyo.
   1987;33:592-5.
8. Usamentiaga E, Val-Bernal JF, Alonso-
   Bartolome P, Lopez-Rasines G, del Valle JJ, 
   Calabia A. Xanthogranulomatous orchitis.