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Case Report

Abdominal Pain Associated with Intra-Abdominal Gonadal Tumor - A Case Report

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Abstract

A case is presented of a 28 year old man with a history of unilateral cryptorchidism who presented with a lower abdominal mass and pain in right iliac region. On investigations an intra-abdominal seminoma was diagnosed. Laparotomy and complete excision was carried out.

Indexing word: Cryptorchidism, Testicular tumor, Orchiectomy

Introduction:

Undescended testicles are risk factors for testicular cancer, especially for development of seminoma. While seminoma comprises 30% to 40% of testicular cancer in normal testicles, this rate is 60% in undescended testicles[1]. The relative risk of tumor development in undescended testicles is 4-7,5 fold higher than normal according to the literature [2,3]. The risk of cancer development is closely related to the position of the testis and intra abdominally located testicles have the highest potential for malignancy[4]. Non seminomatous germ cell tumors are less frequently seen.

Case Report

A 28 year old man presented with pain in right iliac region for one day which was constant and dull aching in nature with no radiation, no aggravating or relieving factor, not associated with vomiting. He noticed absence of testis in right scrotum since childhood. His parents knew about his absence of right testis but did not bother. He gave H/O pain in the same area of two episodes with same character (3& 5 months back respectively). He was diagnosed as a case of acute appendicitis 3 month back & appendicectomy done.

His bowel and bladder habit are normal. He gives no history of cough, haemoptysis or chest pain.

On physical examination, patient is non anaemic, non ecteric. There is an intraabdominal globular mass occupying part of right iliac & umbilical region measuring about 10 cm in diameter, non tender, surface is smooth, margin well defined, firm in consistency, moves side to side but above downward movement is restricted. A scar mark is present in right iliac region which consistent with Grid- iron incision. External genitalia examination reveals under developed right hemiscrotum which is empty & left testis in situ which is normal in size, shape & consistency. Hernial orifices are intact. All accessible lymph node are not palpable. Pertinent laboratory data indicated normal alpha-fetoprotein levels and Beta- human chorionic gonadotropin levels. Complete blood count, liver function tests and urine analysis result were also normal. USG of whole abdomen reveals 75mm X 75mm complex solid heterogenous mass in right lower abdomen may be undescended right testis. A CT scan of

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abdomen and pelvis revealed Fairly large soft tissue mass is seen in right lower abdomen about 6.6cm anteroposteriorly X 10.4cm transversely X10cm craniocaudaly. Heterogeneous enhancement of the mass observed after contrast. The gubernaculums ligament is well visualized in coronal and sagittal images and it is seen extending from right side of scrotum up to this mass.

Considering clinical feature and investigation, laparotomy was done and potentially perform orchidectomy. There was no para aortic lymphadenopathy.Post operatively patient develops wound infection. Secondary closure done on 10thpost-operativeday andreturned to full activity on post-operative day 20. Microscopic examinations revealed seminoma of testis.

Discussion:

The management of crytorchidism in postpubertal patients remains controversial. The 3 basic management choices are orchiectomy, orchiopexy and close observation. The choice of therapy should take into consideration the risk associated with an undescended testicle, which include cancer and testicular torsion. If orchiectomy is considered, issues involved in loss of the testicle must also be addressed, including fertility and cosmetic changes. The presence of one normally descended testis makes hormonal function of minimal concern in unilateral undescended testicle. Ultimately, the therapeutic strategy must be decided on an individual basis.

One of the more important issues in the management of cryptorchidism in adults is the increased risk of testicular cancer. The possibility of cancer was considered in this case,because patients with carcinoma of an intra-abdominal testicle commonly present with abdominal pain[5,6]. The undescended testicle is 5 to 10 times more likely to become cancerous than a normally descended testicle[3]. 11% of all testicular tumors arise in undescended testes[7]. Although tumors occur more frequently in these testes, they tend to occur between the third and fourth decades of life. The histologic distribution of these testicular tumors is comparable to testicular tumors occurring in intrascrotal testes[8]. This increased risk of cancer has been used as a justification for orchiectomy in unilateral disease[8-10].

With unilateral cryptorchidism, there is also an increased risk of cancer in the contralateral, normally descended testicle[11].Which has prompted some authors to recommend increased cancer surveillance in all men with a history of cryptorchidism[12,13]. While this seems reasonable, to our knowledge there are currently no studies demonstrating an effective follow-up strategy for these patients in terms of both cancer detection and cost-effectiveness. In addition, the low absolute risk of cancer in patients who have undergone surgery for cryptorchidism has prompted some authors to challenge the requirement for special surveillance in these patients[14]. Thus, it remains unclear whether there is a need for special surveillance in men who have had surgery for cryptorchidism and there is a need, exactly what methods of surveillance should be implemented.

It has been estimated that torsion, a rare but significant complication of undescended testes, occurs in 64% of intra-abdominal testicles that are cancerous[15]. The increased size of the malignant testis can promote twisting of the testicle on its mesentery. The typical presenting symptoms of torsion of an undescended testicle are abdominal and inguinal pain that may be intermittent, prolonged, or of sudden onset[16]. The possibility of carcinoma with torsion was initially considered in this case. Torsion can progress to infarction and rupture of the testicle, which can lead to hemoperitoneum and generalized peritonitis with a potentially lethal outcome[17]. Thus, suspicion of torsion of an intra-abdominal testicle should be high in men presenting with abdominal pain and an empty hemiscrotum. The surgical and pathologic findings in this patient excluded the above scenarios. The nature of this patient's pain remains unclear. It may have been due to the unfavorable location of the testes. Regardless of the cause, unresolving pain is a clear indication for surgical intervention in patients with cryptorchidism.

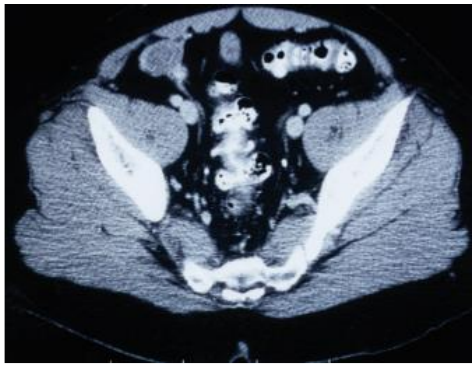


Figure 1: An abdominal CT scans demonstrating a right-sided, intra-abdominal testicle.

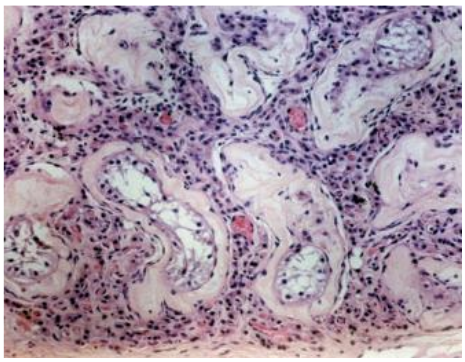


Figure 2: Microscopic view of the pathologic specimen demonstrating Leydig cell predominance and an almost complete lack of germ cells within the seminiferous tubules.

While there are distinct risks associated with retaining an undescended testicle, there are also several concerns associated with removal. Fertility is an obvious concern, but it is probably not a significant reason for retaining an abdominal testicle in an adult with unilateral cryptorchidism. Sperm count and motility remain poor in unilateral undescended testicle, even after orchiopexy, in the postpubertal period[18]. Moreover, because most undescended testicles produce no or negligible amounts of mature sperm after puberty[1o,] the intra-abdominal testicle contributes little with regard to fertility. A recent study found that among men attempting to father 'children, failure to achieve paternity was twice as common in men with a history of unilateral cryptorchidism as compared with normal controls[19]. It is notable that many oligospermic men are able to father children[20]. This should be emphasized when discussing fertility with men who elect orchiectomy for undescended testes. Ultimately, the current evidence suggests that the risk of cancer and torsion should take precedence over concerns about loss of fertility in these cases.

Orchiectomy of an intra-abdominal testicle carries its own inherent surgical risk to the patient. Farrer and colleagues[13] initially demonstrated that after 32 years of age, the risk associated with anesthesia is greater than the risk of death from germ cell testicular tumor in men with a history of cryptorchidism. In their original manuscript, these authors recommended observation in patients older than 32 and orchiectomy in postpubertal patients with impalpable testes who were younger than 32 or unable to participate in surveillance of the testicle. More recently, the same authors now recommend either orchiectomy or orchiopexy for all patients with impalpable testes, regardless of age, and for patients with palpable undescended testes who are younger than 32 years of age[11]. Close observation is reserved for men with palpable undescended testes who are older than 32[11]. Indeed, these and other investigators agree that while orchiopexy is not therapeutic with regard to fertility, orchiopexy accompanied by surveillance of the testicle is an appropriatetreatment inpatients who for psychological or cosmetic reasons do not wish to undergo orchiectomy[12,13]

In the present case, the significant pain, increased risk of cancer and testicular torsion, and the fact that the right testicle was impalpable justified an orchiectomy. We recommended an open orchiectomy. While there are currently no controlled, clinical trials comparing laparoscoping and open orchiectomy. As it is a single case, so before concluding specific opinion it needs further study.

Conclusion:

Orchiectomy is the treatment of choice in an adult presenting with abdominal pain associated with a unilateral intra-abdominal testicle. Because there were constant and dull aching pain, the impalpability of the testicle, the risk of

cancer and the risk of torsion. In light of recent evidence, loss of fertility is not a major concern in adults with unilateral cryptorchidism, because the undescended testicle produces virtually no mature sperm.

Patient perspective

The patient was young, unmarried and educated. He was very much worried about his disease specially knowing that it is a case of carcinoma. After successful operation, he was happy to know that tumor was totally removed. He was disappointed when developed post-operative wound infection. After secondary closure and stitch off when discharged he was happy for successful operation. He felt confident when he knew that disease is curable if post-operative chemotherapy taken successfully.

Consent

A informed written consent was taken from the patient for publish in a journal.

Competing interest

Though Intra-abdominal gonadal tumor is not uncommon but abdominal pain associated with intra -abdominal gonadal tumor is very uncommon. That is why we are very much interested to publish the case in a journal.

Author's contribution

From the admission of the patient history taking and physical examination done by me. I advised all investigation and performed the operation successfully. After operation with patient consent prepared the case for journal presentation.

Author's information

In abdominal pain we should examine the scrotum to see both testes are present or not. Orchiectomy is the treatment of choice in intra-abdominal gonadal tumor.

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