

CHRONIC MYELOID LEUKAEMIA PRESENTING AS PRIAPISM – HOW SHOULD WE TREAT THESE?

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ABSTRACT: Priapism is a urological emergency. The treatment for ischaemic priapism is usually cavernosal aspiration with or without cavernosal irrigation. Some patients may need surgical intervention -the various shunt procedures. We report a 21-year-old man with priapism secondary to chronic myeloid leukemia who needed a combined medical and surgical management. He underwent a spongio-cavernosal shunt as well as cytoreductive chemotherapy to achieve complete detumescence. Therefore, cytoreductive chemotherapy is an adjunct in difficult to treat priapism associated with chronic myeloid leukemia. (*JUMMEC 2008; 11(1):27–29*)

KEYWORDS: Priapism, chronic myeloid leukemia, combined medical and surgical management, cytoreductive chemotherapy

Case Report

A 21-year-old Chinese man was presented with a 72-hour history of priapism. There was no history of drug use, recent trauma or history of haematological disorders. Cavernosal aspiration done revealed very dark blood, unfortunately blood gas was not obtained. Numerous cavernosal aspirations was done but detumescence was not achievable. He subsequently underwent surgical decompression (Spongio-cavernous or Winter's shunt) under general anaesthesia. Despite the shunt, he had partial tumescence (Figure 1).

Clinically, he had splenomegaly and his blood investigations were abnormal: the full blood count revealed a white count of $619 \times 10^9/L$ and a haemoglobin level of 74 g/L. He was referred to the haematologist and subsequently, diagnosed as having a chronic myeloid leukaemia.

He was then treated with cytoreductive therapy with hydroxyurea and the white cell count drastically fell. With these combined approach, he achieved complete detumescence (Figure 2). As expected, due to the long delay in seeking treatment, the patient has subsequently developed erectile dysfunction.

Discussion

The main aim of treating ischaemic priapism aggressively is to prevent erectile dysfunction and corporal fibrosis. The American Urological Association has given a comprehensive general guideline (1) for the treatment of ischaemic priapism. We hope to add to this body of knowledge by illustrating our case. Our case illustrates the need for a combined medical-surgical approach in treating priapism in patients with haematological malignancy, in this case chronic myeloid leukaemia. Our patient underwent corporal aspiration and Winter's Shunt and achieved partial detumescence. Other surgical methods for achieving detumescence are Al Ghorab shunt and the sapheno-cavernous shunt. These shunts have varying results and technically Winter's shunt is the easiest.

Aspiration and corporal lavage with alpha-1 adrenergic agonist such as methoxamine (3) has been reported to be useful in patients with chronic myeloid leukaemia. Other drugs such as adrenaline or phenylephrine could also be used and the latter is the drug of choice.

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Figure 1. Picture of the penis following Winter's Shunt



Figure 1. Picture of the penis about 2 weeks later following cytoreductive chemotherapy

Duration of priapism is an important factor in determining if corporal fibrosis would occur. Generally, the risk of corporal fibrosis is about 60% when the duration of priapism is more than 48 hours (4, 5). Our patient presented late (72 hours) and achieved only partial detumescence with corporal aspiration and Winter's shunt, we, therefore, opted for medical treatment, that is, cytoreductive chemotherapy to achieved complete detumescence. For more rapid

treatment, if the duration of priapism is less than 48 hours, leukapheresis is an option. (The duration of less than 48 hours is purely arbitrary as studies (4, 5) have quoted a high risk of corporal fibrosis, as noted above). Leukapheresis results (instead of hydroxyurea) in prompt reduction of the white count to reduce viscosity and achieve detumescence after failed corporal aspiration (6).

Conclusion

Cytoreductive chemotherapy is an adjunct in difficult to treat priapism associated with chronic myeloid leukaemia.

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