

**THE EFFECT OF THE BURDIZZO CASTRATION ON SERUM PROSTATIC
SPECIFIC ANTIGEN AND TESTOSTERONE LEVELS IN MEN WITH PROSTATE
CANCER.**

By

Dr Gorrett Ibilata MBChB (MUST)

Supervisors:

MR. Stephen Watya, MB.Ch.B, MMed Surgery (Mak)
Senior Consultant Urologist

MR. Josephat Jombwe, MB.Ch.B, MMed Surgery (Mak), FCS (ESCA),
Senior Registrar Department of Surgery.

**A dissertation submitted to the School of Graduate Studies in partial fulfilment of the
requirements for the award of Master of Medicine in Surgery of Makerere University
Kampala.**

2011

ABSTRACT

Background

Bilateral subcapsular orchidectomy has been one of the surgical methods of androgen deprivation treatment in late stage prostate cancer however it is invasive and has been associated with complications such as haematoma, haemorrhage and infection and requires an operating room. The study aims at determining if the Burdizzo castration offers a novel form of incisionless, bloodless surgical androgen deprivation treatment in men with prostate cancer.

Methods

This case series was conducted in Mulago National Referral and Teaching Hospital on patients with a confirmed histological diagnosis of prostate adenocarcinoma and destined for bilateral subcapsular orchidectomy between August 2009 and March 2011. The Burdizzo castration was performed on patients who satisfied the selection criteria. Prior to the castration the patients had a blood sample taken off for serum TT levels, volume of testis measured, and performance status graded. They were followed up for a period of six weeks on days 3, 7 and 42 where testicular volumes were measured, performance status graded, blood samples for serum TT levels and a final PSA level on day 42.

Results

The mean age of the participants was 70. There was a significant effect on serum PSA with a mean reduction of 119.06ng/ml which was statistically significant (p-value 0.00). The mean change in serum TT levels was 537.2, 393.8 and 83.90ng/ml on day 3, 7 and 42 respectively which was not statistically significant with p-values of 0.8531, 0.3600 and 0.9241 respectively. The testicular volumes reduced to half the original size with a p-value of 0.000. There was an overall improvement in performance status of 70% post castration. The noted side effects were mild pain and scrotal oedema for all the patients with only four having a superficial skin infection noted on day 3. Three patients died before completing the study however the fourth died 6 days after the study.

Conclusion The findings suggest that the Burdizzo castration could be an effective safe method of castration as evidenced by the clinical reduction of PSA and testosterone levels, reduction in the size of the testis and improvement of performance status with a few observed side effects. However further evaluation using a randomized controlled trial to establish its efficacy is required and a long term follow up of the patients is needed.