Granulomatous Prostatitis: A Reminder to Clinicians

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SUMMARY
Granulomatous Prostatitis (GnP) is a heterogenous entity classified into specific infections, non-specific infections, post surgical i.e. post-transurethral resection of prostate (TURP) and rare secondary (systemic) causes. A total of 1388 reports of prostatic biopsy and prostatic chips from TURP were reviewed from 1995 and 2007. The results which showed granulomatous prostatitis were analyzed and retrospective data collected from the patient’s records. A total of 9 cases with granulomatous prostatitis were identified. There are 3 types of entities which are the non-specific (NSGnP), post-TURP and the specific type. The incidence of GnP in our center is lower than reported by Stillwell et al. The majority of the patients were Malays.

KEY WORDS:
Granulomatous Prostatitis, Non-specific infection, Specific infection, Post-TURP

INTRODUCTION
Granulomatous Prostatitis (GnP) is a heterogenous entity encompassing lesions attributed to specific infections, non-specific infections, post surgical (i.e. post-transurethral resection) and rare secondary (systemic) causes which is based on the classification system proposed by Epstein and Hutchins that is widely accepted and generally used. Infective causes include BCG instillation for superficial transitional cell carcinoma of the bladder and less frequently Mycobacterium tuberculosis infection, various fungi and other organisms. Post-surgical GnP is usually the result of transurethral resection of the prostate. Rare secondary causes include Wegener’s granulomatosis and an allergic reaction associated with asthma. NSGnP may be clinically and histologically mistaken for prostatic adenocarcinoma, occasionally leading to surgical overtreatment. In the data reported by Stillwell the incidence of GnP consisted of 69% NSGnP, 24.5% post-TURP GnP, 3.5% infective (IGnP), and 3% systemic GnP. The present study was undertaken to look at the incidence of GnP and its characteristics in our center.

MATERIALS AND METHODS
All data from prostatic biopsy between 1995 and 2007 at our center were reviewed. A total of 1388 reports of prostate biopsy and prostatic chips were reviewed. All histopathological results showing granulomatous prostatitis were analyzed and retrospective data collected from the patient’s records. Those who were found to have granulomatous prostatitis were further subdivided into Epstein and Hutchin’s classification i.e. specific, non-specific, post-TURP and allergic granulomatous prostatitis. The selected patients data were studied and analyzed according to their age, race, documented urine culture and underlying medical illnesses as well as any previous TURP surgery documented.

RESULTS
There were 9 cases with granulomatous prostatitis aged from 16 to 79 years (mean 59.5 years). This constitutes 0.65% from the total 1388 cases of prostatic biopsy. Four (4) out of 9 cases were Malays (44%), three (3) were Chinese (30%) and 2 (2) more were Indians (22%). The diagnosis was obtained from TURP specimens in 66.7% (n=6) cases, from transrectal ultrasound (TRUS) biopsy in 22.2% (n=2) and 11.1% (n=1) from Trucut biopsy of the prostate. NSGnP was noted in 55.6% (n=5) whereas 22.2% (n=2) post-TURP GnP and another 22.2% (n=2) had a specific infection causing GnP. The two patients with specific granulomatous prostatitis had coexisting pulmonary tuberculosis, while those with NSGnP had documented urinary tract infection. None of the patients were noted to have allergic type of GnP.

DISCUSSION
The pathogenesis of GnP remains unknown but extravasation of prostatic secretions due to inflammation (i.e. from infection, surgical diathermy or tissue necrosis), and blockage and rupture of prostatic ducts appear to be important factors in the development of granulomas. These processes can occur in normal, carcinomatous or most commonly in a nodular hyperplastic prostate gland. The distribution is generally periglandular with some glandular destruction. It is reported in most cases that the cause of GnP is unknown, but GnP can occur after various events, e.g. UTH (73%), TURP/open prostatectomy, needle biopsy and instillation of BCG into the bladder. From our study, we have found that the incidence of GnP in our center is lower than reported by Stillwell et al, (which calculated a 0.8% incidence of GnP in a series of needle biopsies and transurethral resection). Our series showed only an incidence of 0.65%. Majority of our patients with GnP were Malays followed by Chinese and Indians.

Our study also revealed that the non-specific granulomatous prostatitis (NSGnP) is the most common granulomatous lesions of the prostate, followed by the post-TURP type and specific GnP type. None of the patients in our series had an allergic GnP. NSGnP is usually reported as an incidental finding, with an incidence of 3.4% in an unselected series of patients; it is detected in 0.44% of routine prostatectomy.