To Study Spectrum Of Histopathological Lesions Of Prostate with Clinical Concordance At Tertiary Care Hospital

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Abstract: This study aimed to evaluate the spectrum of histopathological lesions of prostate and assess their clinical concordance at a tertiary care facility. This observational cross-sectional study was conducted in the Department of Pathology, Dhiraj Hospital. A total of 61 consecutive patients with prostatic lesions were included during the study period from December 2024 to October 2025. Prostate biopsy specimens were processed routinely and examined histologically. Relevant clinical findings were recorded and prevalence of various prostatic lesions was calculated. Benign prostatic hyperplasia with acute or chronic inflammation was the most common lesion, accounting for 54% of cases, followed by benign prostatic hyperplasia without inflammation in 31% cases. Malignant lesions comprised 13% of cases. The most commonly affected age group was 61- 70 years. The youngest patient was 37 years old, while the oldest being 82 years. Histopathological evaluation remains the gold standard for diagnosis of prostatic lesions. Benign prostatic hyperplasia with inflammation is the most frequent finding.
Accurate histopathological diagnosis is crucial for appropriate clinical management and prognostication.
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INTRODUCTION

Prostate is a pear shaped largest accessory glandular organ of male reproductive system. It secrets Proteolytic enzymes in the semen which act to break down clotting factors in the ejaculate which allows semen to remain in fluid state moving through out female reproductive system for potential fertilization. Prostatic lesions are common with advancing age causing symptoms related to urinary tract. Anatomically prostate is positioned inferior to neck of bladder, superior to external urethral sphincter with levator ani muscle lying inferolaterally to the gland. Anatomical arrangement of prostate is important because it is utilized during digital rectal examination. Confirmation of prostatic lesion can be done only after histopathological examination. Prostate specific antigen (PSA) is also important tumor marker in diagnosing prostatic

rd carcinoma rd of prostatic gland is glandular
2/3 while 1/3 is fibromuscular. Enlarged prostate causes compression of urethra

resulting in signs and symptoms related to lower urinary tract. Common symptoms include urinary frequency, urgency and nocturia.

AIMS & OBJECTIVES

1.   This study was conducted to study histopathological features along with clinical profile of patients with prostatic lesion.

2.   To calculate prevalence of various prostatic lesions.

3.   To know the most common clinical presentation along with presenting age group in study population.

MATERIAL AND METHODS

This study was conducted in Department of Pathology- S.B.K.S. MI & RC, Vadodara.(Sumandeep Vidyapeeth University) Total 61 patients were enrolled in this study admitted in Dhiraj general hospital. In this observational study retrospective data was collected and analysed of patients with prostatic lesion admitted from Dec OCTOBER 2025. 'TURP' chips received were analysed for histopathological examination.

RESULT AND DISCUSSION:

	BPH	BPH WITH ACUTE/CHRONIC INFLAMMATION	BPH WITH ABSCESS	PROSTATIC CARCINOMA	TOTAL PROSTATIC LESIONS
NO. OF CASES	19	33	1	8	61
PERCENTAGE	31.14 %	54.09 %	1.63 %	13.11 %	100 %

AGE WISE DISTRIBUTION OF CASES

AGE	< 50 YRS	50-55 YRS	56-60 YRS	61-65 YRS	66-70 YRS	71-75 YRS	> 75 YRS
NUMBER OF CASES	5	10	9	11	12	7	7

Youngest PT. - 37 Yr Eldest PT.- 82 Yr
Most Common Presenting Age Group Of PTs with Prostate Lesions- 61-70 Yrs

DIAGNOSIS

1.) Digital rectal examination.
2.) Prostate specific antigen

PSA <4 ng/ml is generally considered normal however there are various factors that can fluctuate PSA level. PSA level tends to increase with age, prostate gland size, infection and inflammation, recent prostate biopsy, ejaculation and vigorous exercise. Drugs like finasteride and dutasteride tends to lower PSA level. Generally, higher the man's PSA level, it is more likely that he has prostate cancer.
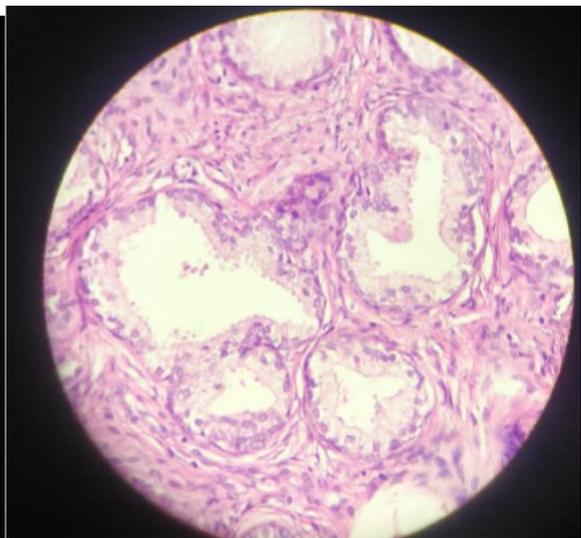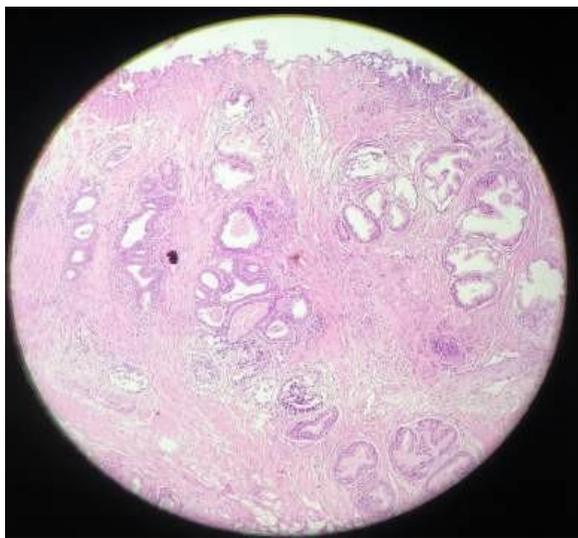
3). Biopsy and histopathological examination.

FIG.PROSTATE ADENOCARCINOMA, 10X (H&E)-GLEASON SCORE 6   FIG.BPH   WITH
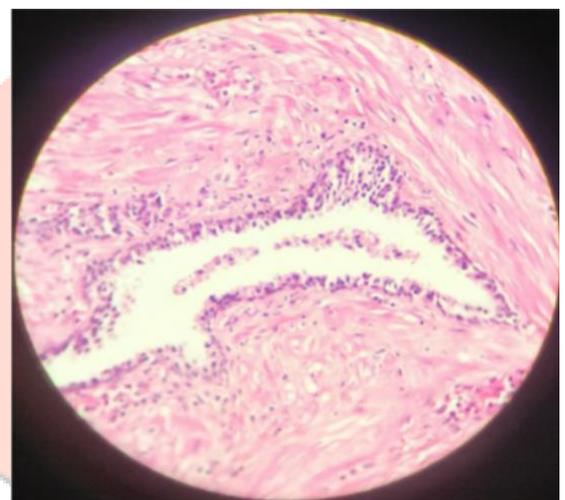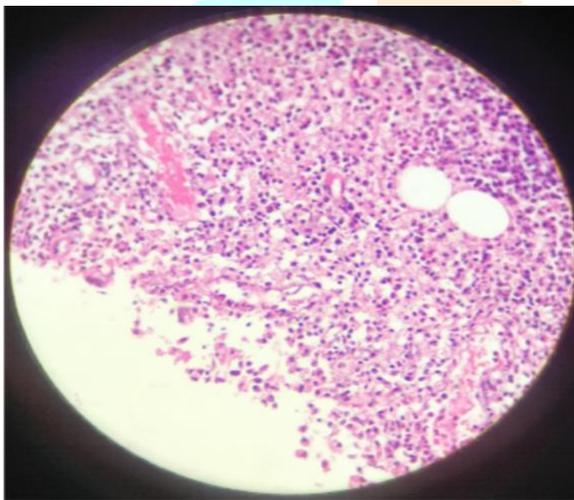CHRONIC INFLAMMATION, 40x (H&E)

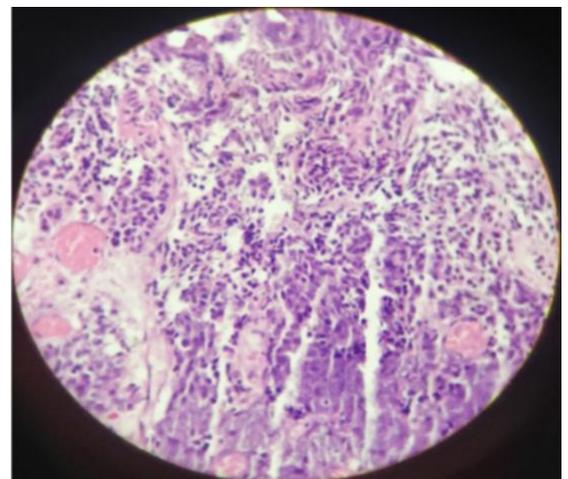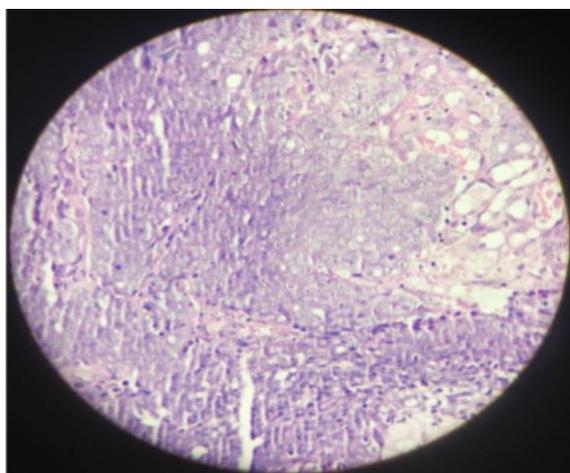FIG.BPH WITH PROSTATE ABSCESS, 40x (H & E)   FIG.BPH WITH PROSTATE ABSCESS,
40x (H & E)

FIG.POORLY DIFFERENTIATED PROSTATE ADENOCARCINOMA, 40x (H&E)-   FIG.POORLY
DIFFERENTIATED PROSTATE ADENOCARCINOMA,40x (H&E)-
Gleason score 8   Gleason score 8

MODIFIED GLEASON SCORE-PROSTATIC CARCINOMA

Grade group	GLEASON SCORE	HOSTOLOGICAL FEATURE
1	≤3+3=6	Only individual discrete well-formed glands
2	3+4=7	Predominantly well-formed glands with lesser component of poorly formed glands, fused glands glomerations, or cribriform glands
3	4+3=7	Predominantly poorly formed glands, fused glands glomerations, or cribriform glands with lesser component of well-formed glands (if >5%)
4	4+4=8	Only poorly formed glands, fused glands, glomerations or cribriform glands
	3+5=8	Predominantly well-formed glands with lesser component of sheets, cribriform glands with comedo-necrosis, or single cells
	5+3=8	Predominantly sheets, cribriform glands with comedonecrosis, or single cells with lesser component of well-formed glands (if >5%)
5	≥4+5=9	Only Sheets

CONCLUSION

In this study, most common prostatic lesion is   benign prostatic hyperplasia-86.88%.
- Most common presenting age group is 61-70 yrs.
- Histopathology is gold standard in diagnosing prostatic lesions.
- Generally higher the PSA level, higher the chances of malignancy however PSA level is affected by other factors as well like age, infection/inflammation, recent prostate biopsy, ejaculation etc.
- Most common presenting complaint was difficulty in passing urine(65%).
Majority of benign prostatic lesion were in age group of 61-70 yrs while malignant lesion in age group of 71-80 yrs.
- Adenocarcinoma were graded according to modified Gleason system which was based on degree of glandular differentiation at low power examination**.**

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