The Scientific Journal of University of Benghazi

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Benign and Malignant Diseases of The Prostate - A Clinicohistopathological Study

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Received: 04 / 11 / 2022; Accepted: 03 / 12 / 2022

الملخص:

الخلفية: افات غدة البروستاتا الورمية والغير ورمية هي الاسباب الرئيسة للأمراض والوفيات عالميا. معدل الأمراض يزيد مع العمر. جوهريا، خزعة البروستاتا هي الفحص الذي يكشف الحالات الخبيثة والحميدة الأخرى للبروستاتا للمرضى الذين لديهم اعراض بولية. طرق اخرى للتشخيص تطورت تشمل الطرق الاشعاعية والعلامات البيولوجية للبروستاتا، على أن الخزعة والفحص المجهري هي المقياس الذهبي للتشخيص النهائي. **الأهداف:** أجريت الدراسة الحالية لمعرفة وتحديد الأنماط النسيجية المرضية المختلفة لأمراض البروستاتا والأعراض المصاحبة لها. **الطريقة:** أجريت مراجعة لسجلات عينات من نسيج البروستاتا لعدد 194 مريضاً مأخوذة من قسم الأمراض-كلية الطب-جامعة بنغازي في الفترة من يناير إلى ديسمبر 2009. العينات المستقبلة ثبتت في الفورمالين المخزون المتعادل 10% والتحضير الشمعي الروتيني متبوعة بصبغة الهيماتوكسيلين والايوسين. جميع العينات حللت باستخدام المؤشرات التالية: نوع العينة، عمر المريض، النمط النسيجي المرضى، التشخيص النهائي. مع تطبيق تصنيف جليسون المعدل للتصنيف. **النتائج:** قيمت131 عينة خزعة بالمنظار، 42 عينة خزعة بالابرة،21 عينة استئصال جراحي للبروستاتا. قسمت الى امراض حميدة، قبل خبيثة، خبيثة. استخدم تصنيف جليسون المعدل لتصنيف سرطان البروستاتا. كان متوسط الأعمار 70.7عام. 153 حالة (78.87 %) حميدة، 7حالات (3.6%) قبل خبيثة، 34 حالة (17.53%) خبيثة. نسبة الخبيثة إلى الحميدة (4.7:1). تراوحت الأعمار من 24-100 عام. الأكثر شيوعا بين الأمراض كان تضخم البروستاتا الحميد، خصوصا في العقد السادس. نوع غدى-سدى أكثر الانواع مشاهدة بنسبة (86.8%)، متبوعاً بنوع غدى بنسبة (13.2%). الامراض المصاحبة لتضخم البروستاتا الحميد شملت التهاب البروستاتا، تضخم الخلايا القاعدية، حؤول الخلايا الحرشفية، التضخم الغدي غير النمطي (قبل خبيثة). سجلت حالة واحدة سليلة في احليل البروستاتا. خلال الحالات السرطانية ادينوكارسينوما كان أكثر الأمراض ملاحظةً في العقدين السادس والسابع بنسبة (91%). جليسون 7 كان الأكثر عددا. حالة واحدة منتشرة من المثانة البولية إلى البروستاتا. **خاتمة:** افات البروستاتا الحميدة هي الأكثر شيوعا من الآفات الخبيثة، الأغلبية أحصيت في الفترة العمرية (61-70) سنة. يوجد اختلاف كبير في الاعراض بين الحالات الحميدة والخبيثة. نحتاج دراسات اخرى مستقبلا لمعرفة العوامل البيئية والاجتماعية المشاركة لمرض البروستاتا

الكلمات المفتاحية: تضخم البروستاتا الحميد، سرطان البروستاتا، تصنيف جليسون المعدل.

Abstract

Background: Neoplastic and non-neoplastic prostate gland lesions are the main reasons for morbidity and mortality throughout the world. The risk of diseases increases with age. Basically, Prostate biopsy is a test which detects malignant and other benign conditions of the prostate in patients who have urinary symptoms. Other modalities of diagnosis also have been developed, comprising of radiological modalities and prostatic biomarkers. However, biopsy with microscopic examination is the gold standard for the ultimate diagnosis.

Objectives: The present study was done to recognize and determine the different histopathological patterns of prostatic diseases and their clinical presentation correlations.

Patients and methods: Reviewing of 194 patient specimens of prostatic tissues in the department of pathology, faculty of medicine, university of Benghazi from January to December 2009 was conducted. The received specimens were fixed in 10% neutral buffered formalin and routine paraffin processing followed by hematoxyline and eosin staining was done. All the specimens were analysed with following parameters: type of specimen, age of patient, histopathological pattern and final diagnosis. With application of modified Gleason scoring for grading.

Results: 131 TURP, 42 needle biopsies, and 21 prostatectomy specimens were assessed, they were grouped into benign, premalignant, and malignant disorders. Modified Gleason`s Scoring was used to score the prostatic adenocarcinoma. The Mean of all patient's age was 70.7 years. 153 (78.87%) were benign, 7 (3.6%) were premalignant and 34 (17.53%) cases were malignant. Malignant to benign ratio (1: 4.7). Age ranged was 24-100 years. The most frequent disease encountered was BPH, mainly in the sixth decade. Glandular-stromal pattern was more frequently seen (86.8%), followed by glandular predominance (13.2%). Concomitant conditions such as prostatitis, Basal cell hyperplasia, squamous metaplasia, and atypical adenomatous hyperplasia (AAH) (premalignant) were observed. Among the malignant conditions, acinar adenocarcinoma was the commonest disease seen in sixth and seventh decades by (91%), and Gleason`s score 7 was the commonest. One of the cases was metastatic TCC from urinary bladder.

Conclusion: Benign lesions of prostate are more common than malignant lesions, most commonly encountered in age group of 61 to 70 years. There is a major difference in symptoms between malignant and benign conditions. More studies are needed in future to identify environmental and social factors contributing prostate disease.

Keywords: Benign prostatic hyperplasia (BPH), Prostatic Carcinoma (PCa), Modified Gleason Scoring.

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1. INTRODUCTION

The prostate is the main exocrine accessory reproductive gland in men. It is procedures prostatic secretion which is an important part of seminal fluid (1). Anatomically prostate gland is situated at the neck of bladder, the enlargement of the gland may result in urinary symptoms such as hesitancy, urine retention, urgency and dribbling (2).

Prostate gland disorders in male patients are a major source of morbidity and mortality. With age, the probability of diseases will increase. The extent of diseases composed of inflammatory disorders, nodular hyperplasia (BHP), and prostate cancer (3). Prevalence of BHP is more in eighth decade of life that is 90 % as compared with 20 % in age group of 40 yrs (2). Prostatic carcinoma is globally the second most frequently diagnosed cancer and the sixth leading cause of cancer death in males (4).

Prostatitis formed the predominant infiltrates in benign lesions, regularly seen in specimens or accompanying BPH (4). Infrequently, Non-specific granulomatous prostatitis is observed in the prostate specimens. The disease was distinguished by Tanner and Mc Donald in 1943 for the first time, who reported an occurrence rate of 3.3% of granulomatous prostatitis in inflammatory conditions (5).

A prostate biopsy basically is a procedure in patients with particular indications for neoplastic and other non-neoplastic prostate conditions. Other methods of diagnosis, involving radiological modalities and prostatic biomarkers, have also been advanced. Nonetheless, the gold standard for terminal diagnosis is histopathological biopsy (3).

The current cross-sectional study aims at analyzing histopathological characters of different malignant and non-malignant lesions of the prostatic tissue in a period of one year.

2. PATIENTS AND METHODS

The study was conducted in the department of pathology, faculty of medicine, university of Benghazi - Libya. The study period was from January to December 2009 and information regarding prostatic specimens was retrospectively gathered from archives of histopathology register. Transurethral resection of prostate (TURP), needle biopsy, and open prostatectomy samples were assessed. The obtained samples were fixed in 10% neutral buffered formalin and usual paraffin processed. Three to five micron sections were cut and finally stained by Hematoxylin and Eosin (H&E).

Demographic data were examined regarding the age, type of biopsy, and digital rectal examination (DRE) findings. Data analyzed with the next considerations: age of the patient, clinical picture, pathological pattern, and final diagnosis.

Following histopathologic assessment, the data were classified into benign, premalignant, and malignant. Tumors were categorized according to histologic grading using a modified Gleason's Scoring.

The entire data were evaluated statistically by using the SPSS statistical package version 21(Chi-square test). Independent t-test was used to correlate the mean age between patients with benign and malignant lesions. A P-value of less than 0.05 was considered as statistically significant.

3. RESULTS

A total of 194 cases were reviewed, the specimens comprise of 131(67.53%) TURP chips, 42 (21.65%) true-cut needle biopsy, and 21(10.82%) open prostatectomy specimens. 153 (78.87%) cases were benign, 7 (3.6%) cases were premalignant and 34 (17.53%) cases were malignant. In the TURP specimen's majority were benign lesions (115), while (16) biopsies displayed prostatic malignancy. Also, the superiority of open prostatectomy showed in benign lesions by (20) specimens as compared to the malignant lesion by (1) specimen. In the needle biopsies, (25) and (17) specimens showed benign and malignant lesions respectively (Table 1). This result was statistically significant (p-value 0.000).

Regarding the age of the patients in this study, Patients aged 24-100 years. The Mean of all patient's age was 70.7 years, for non-malignant prostatic lesion 70.2 years, premalignant lesion 75 years, and for prostate malignancy 72.15 years. There was no major variation in the mean age between patients with benign and malignant lesions (p-value 0.40) (Table 2). Malignant to benign ratio (1: 4.7). Age-wise distribution of prostatic lesions is shown in (Table 3), the peak existence of malignant cases was distributed in two age groups, i.e., in 61-70 and 71-80 years. The youngest patient with malignancy was 50 years and the oldest patient was 97 years. Greatest benign cases i.e., 65 (42.6%) were observed in the age group 61-70 years. The youngest benign patient was 24 years old and the oldest was 100 years.

Clinically, when benign and malignant lesions were compared, urine retention was a more common finding among the benign cases accounting for (61.9%), and (17.6%) for malignant cases. Hematuria was seen in 5 (3.1%) of benign cases (2 patients accompanied with urinary bladder carcinoma and 2 patients with infarction) and 10 (29.4%) of malignant cases. By USG, about (8.8%) of histopathologically benign patients were showed enlarged prostate. Digital rectal examination findings (DRE) showed hard prostate in 10 (29.4%) cases of prostate malignancy. This result was statistically significant (p- value 0.000) (Fig. 1).

Benign prostatic hyperplasia biopsies were classified regarding the predominant growth pattern, the glando-stromal pattern was more frequently faced by 138 (86.8%) cases, followed by glandular predominance (adenomatous) by 21 (13.2%) cases. BPH cases exhibited hyperplastic glands; lined by papillary pseudostratified columnar epithelium, cystic atrophic changes (cystically dilated acini lined by flattened epithelium & filled with Corpora Amylacea), and prominent (dense) fibromuscular stroma (Fig. 2 & 3). Features of atypical adenomatous hyperplasia, and basal hyperplasia were also seen (Fig. 4).

Microscopic finding associated with Benign Prostatic Hyperplasia includes, BPH without any associated microscopic finding was about 83 (51.87%) cases, the number of cases of BPH associated with prostatitis was in 48 (30%) cases (chronic nonspecific prostatitis in 39 cases, acute inflammation in one case, acute on chronic inflammation in 6 cases, and 2 cases have features of granulomatous prostatitis which showed large nodular aggregates of epithelioid cells, lymphocytes, multinucleated giant cells, and neutrophils). Squamous metaplasia (including squamous metaplasia of prostatic urethra) was seen in 12 cases accounting for (7.5%), basal cell hyperplasia was seen in 5 cases about (3.13%), features of infarction were seen in 5 (3.13%) cases, and Atypical adenomatous hyperplasia with BPH was seen in 7 cases (4.37%) (Fig 5).

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In this study, Carcinoma of the prostate was detected in a total of 34 (17.5%) patients. All of them exhibited acinar adenocarcinoma patterns (91%) except, one case each of adenocarcinoma with small cell differentiation, metastatic transitional cell carcinoma (TCC) from urinary bladder, and ductal adenocarcinoma (Fig 6 & 7).

According to Gleason scoring of the total cases of adenocarcinomas exhibited that GS 7 comprised the biggest group with `12 cases (38.7%), GS 6 and GS 9 were the next most frequently with 5 cases each (16.1%). Gleason score of 8 comprised 4 cases (12.9%), GS 3 comprised 3 cases (9.8%), GS 5, and GS 10 had one case each (3.2%). Two cases don't have a score because of the little sample, one case (TCC) don't undergo Gleason scoring.

Among the 34 cases reported as prostatic carcinoma perineural infiltration was seen in two cases. One case had Gleason score 7 and the other was ductal carcinoma. The vascular invasion also seen in two cases, lymphatic in one case.

Numerous histopathological findings were noted in benign and malignant lesions. In benign cases, papillary hyperplasia was the most common observed epithelial hyperplasia by 147 (75.7%) cases, atypical hyperplasia accounted 7 (3.6%) cases, and basal hyperplasia accounted 5 (2.5%) cases (Fig. 8). In malignant cases, the commonest findings were noted in prostatic adenocarcinoma is cribriform and acinar pattern by 15 (7.7%) cases followed by 6 (3%) cases each of (cribriform & sheet) and acinar patterns (Fig. 8).

Table 1. Type of biopsies according to prostatic lesions:

Type of biopsy	Benign (%)	Malignant (%)	Total (%)
TURP*	115 (71.9%)	16 (47.1%)	131 (67.6%)
Needle Biopsy	25 (15.6%)	17 (50.0%)	42 (21.6%)
Open prostatectomy	20 (12.5%)	1 (2.9%)	21 (10.8%)
Total	**160 (100%)**	**34 (100%)**	**194 (100%)**

*TURP=Transurethral resection of prostate

X^2 =20.22 P-value= 0.000

Table 2. Comparison of Mean age according to prostatic lesion of patients:

Prostatic lesion	Mean age	Number	SD
Benign	70.29	153	10.389
Malignant	72.15	34	11.343
Premalignant	75.00	7	8.406
Total	**70.79**	**194**	**10.505**

Ratio of Malignant to Benign =1: 4.7 p-value= 0.40

Mean age of Benign cases=70.2 years Min=24 Max=100 SD=10.33

Mean age of Malignant cases=72.15 years Min=50 Max=97 SD=11.34

Table 3. Age incidence of various prostatic lesions:

Age groups/years	Benign (%)	Premalignant (%)	Malignant (%)
< 40	1 (0.6 %)	0 (0.0%)	0 (0.0%)
40-50	1 (0.6 %)	0 (0.0%)	1 (2.9%)
51-60	24 (15.7%)	0 (0.0%)	5 (14.7%)
61-70	65 (42.6%)	3 (42.8%)	11 (32.4%)
71-80	38 (24.8%)	2 (28.6%)	10 (29.4%)
>80	24 (15.7%)	2 (28.6%)	7 (20.6%)
Total	**153 (100%)**	**7 (100%)**	**34 (100%)**

Mean age =70.79 years Min=24 Max=100 SD=10.50 X 2 =4.77 P-value= 0.90

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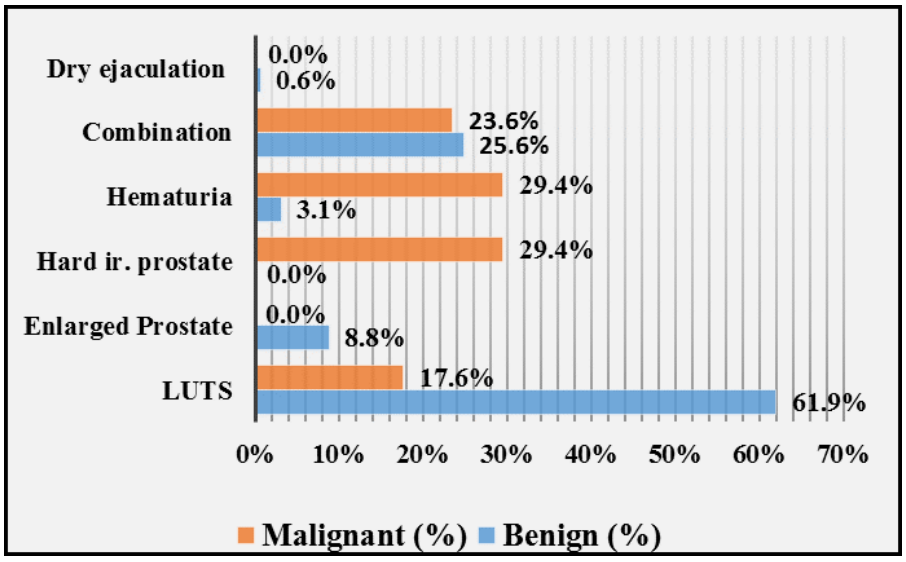


Figure 1. Distribution of clinical presentations according to the prostatic lesion

X 2 =85.49 P-value= 0.000

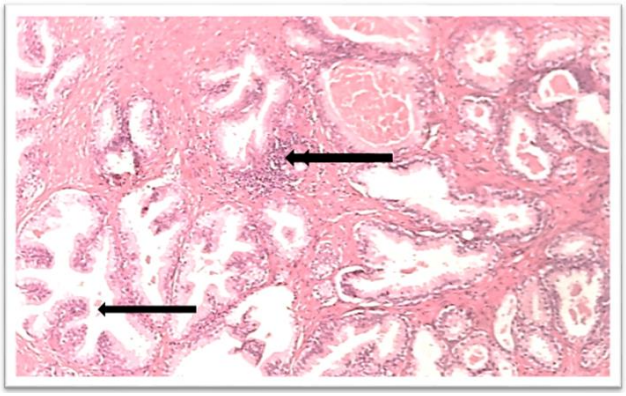


Figure 2. Photomicrograph of benign prostatic hyperplasia showing hyperplasia of glands with papillary enfolding (arrow) in a thick fibromuscular stroma, and small foci of nonspecific inflammatory cells(lymphocytes+ plasma cells) are also seen (double head arrow) (H&E x100).

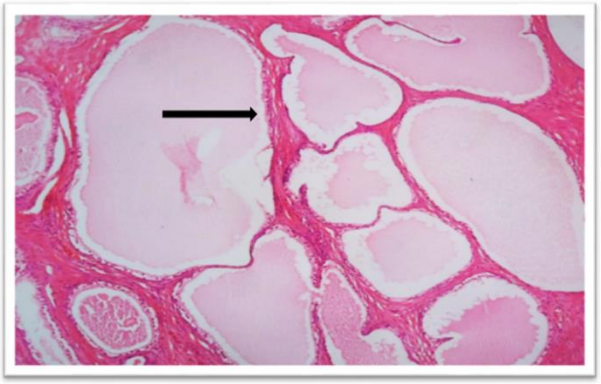


Figure 3. Photomicrograph of benign prostatic hyperplasia with cystically dilated glands with thin epithelium (arrow). Lumen shows corpora amylacea. (H&E x100).

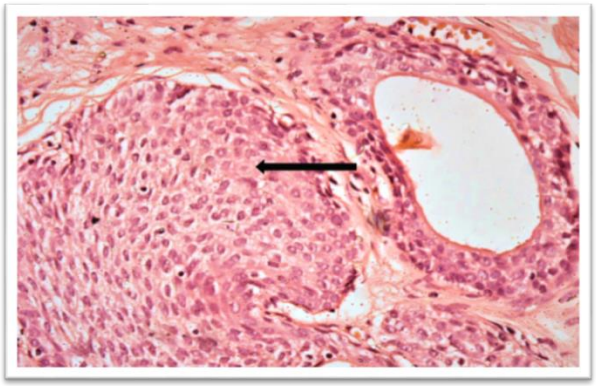


Figure 4. Photomicrograph of basal cell hyperplasia showed nests of proliferating basal cells (arrow) (H&E x400).

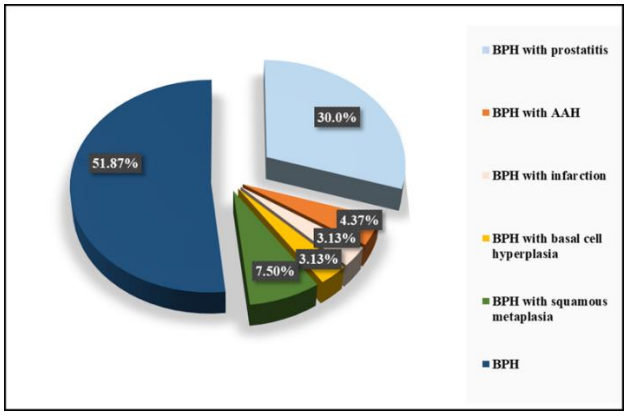


Figure 5. Microscopic finding associated with Benign Prostatic Hyperplasia (BPH) (n=160)

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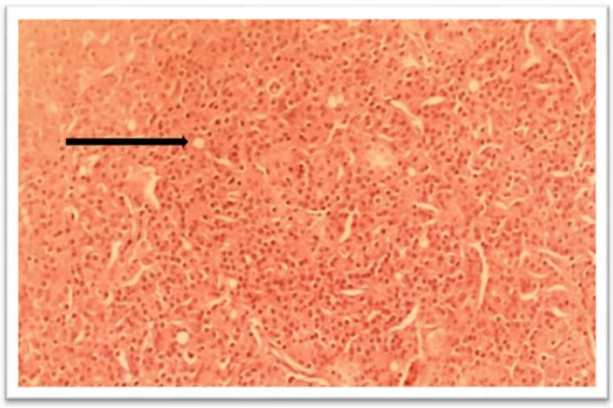


Figure 6. Photomicrograph of prostatic adenocarcinoma GS 8(4+4). The section showed prostatic tissue which is replaced by sheets of malignant cells, trying to form acini (arrow) with irregular border, the cells showed hyperchromatic nucleus with small nucleolus. Some cells have clear cytoplasm & some have esinophilic cytoplasm. Occasional large bizarre cells are also seen. The mitotic activity is very low. (H&E x100).

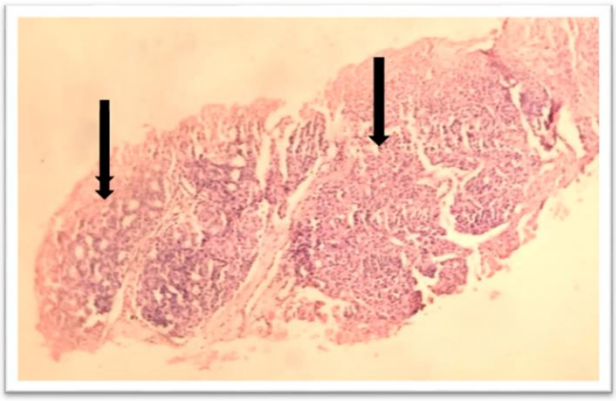


Figure 7. Photomicrograph of prostatic adenocarcinoma GS 9(4+5). The section showed neoplastic infiltrative lesion composed of confluent glands showing fusion and back to back pattern with scattered lumens and focal cribriform morphology (pattern 4) (double head arrow) admixed with solid foci showing sheet like pattern without luminal formation or glandular differentiation (pattern 5) (arrow). (H&E x100).

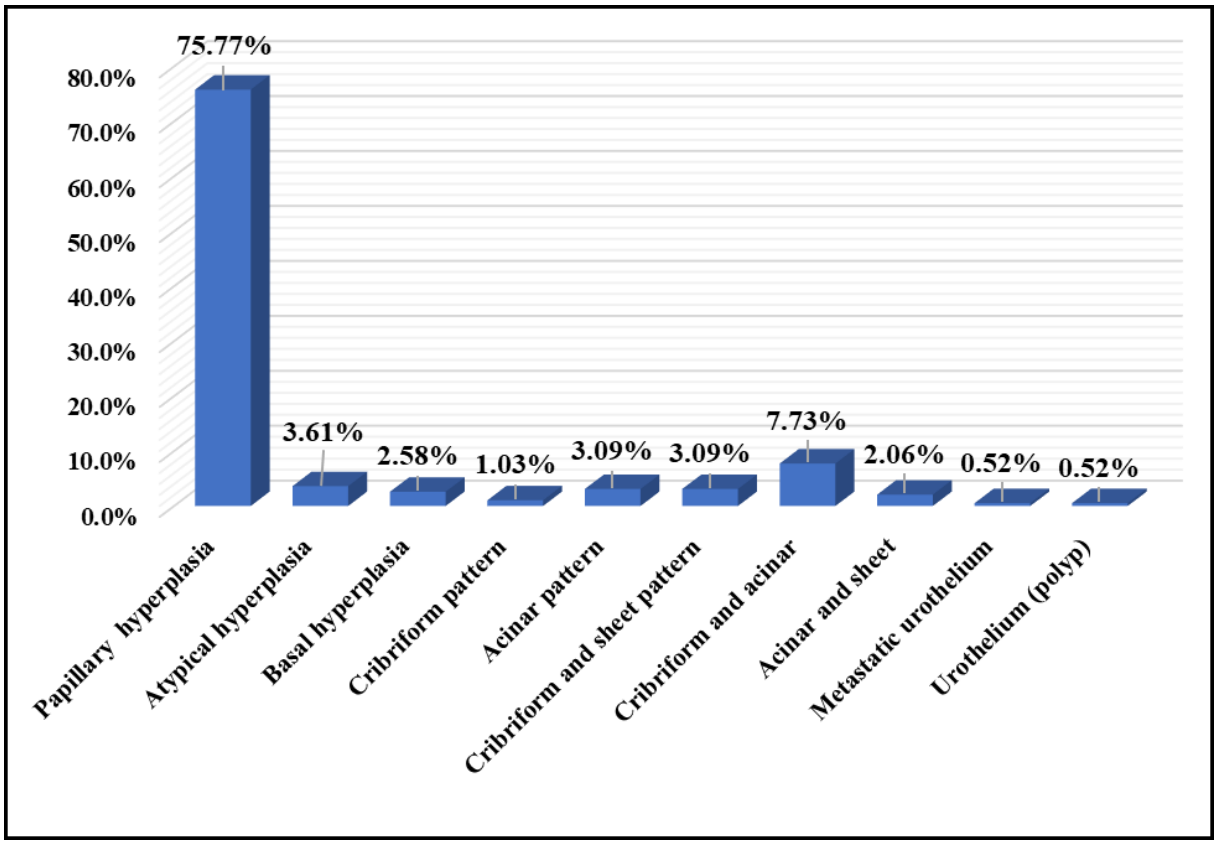


Figure 8. Microscopic finding in Benign and malignant lesions

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4. DISCUSSION

A retrospective study of 194 cases of the prostate sample was done, the result was recorded and comparison with other studies was reported.

In this study, the majority of the specimens received were TURP (67.53%), followed by needle biopsy (21.65%), and open prostatectomy (10.82%), which were parallel to study was done in India (1), where TURP comprised the majority of samples received (99.3%) and (0.7%) was prostatectomy specimen. TURP procedure involved in (71.9 %) of benign cases and in (47.1%) of malignant cases in the current study. This might be because TURP is a chosen surgery for nodular hyperplasia of the prostate as it is an easy procedure with lesser complications (6). In a study was done in Saudi Arabia (7), TURP was the 2nd type of biopsy (25.7%) used after transrectal ultrasound (TRUS) biopsy. In this study, needle biopsies were common, and in malignant cases account in 17 (50%) cases as compared with benign 25 (15.6%) cases. The little bit superiority of needle biopsy (transrectal/ true-cut) over other types of biopsies in the detection of malignant prostatic disease was explained by a study done by Anim *et al* (8), where it samples the posterior lobes (peripheral zone), which are commonly involved by cancer, and more accessible by the transrectal route.

The two most common disorders involving the prostate gland are benign prostatic hyperplasia (BPH) and adenocarcinoma (3). In the present study, BPH in total (benign and premalignant cases) were (82.5%), and prostatic carcinoma cases were (17.5%). Anim *et al* (8) showed a similar result with (84.8%) of BPH frequency with a similar peak age of incidence to this study and (15.2%) cases of carcinoma.

Prostatic carcinoma and benign prostatic hyperplasia (BPH) are increasing frequently by aging progression (9). In the current study, the age range affected by prostatic pathology was 24-100 years. Maximum cases of BPH, i.e., 65 cases were seen in the 61-70 yrs age group similar to reports documented in Oman (10) and Yemen (11). There is a decline in the age incidence of BPH patients after age group 61-70 yrs, which is in concordance with other studies (1, 12). That may be attributed to the decreasing of the aged male population in Libya, whose population is predominantly younger. Prostatic carcinoma was encountered predominantly in the age group 61-70 years by 11 cases, which similar to a study was done by Mital *et al* (3), and in more advanced age group 71-80 years by 10 cases that are similar to another study which was done by Kusuma *et al* (12). This age distribution indicates that PCa in Libya predominantly occurs in the older in men aged 60 years and above as reported by El Mistiri *et al* (13).

In the current study, the peak incidence of both premalignant lesions and prostatic carcinoma was seen in the (61-70 and 71-80) yrs. age groups. A comparison between the two conditions revealed that no such age difference was noted. A study by Birare *et al* (1) shows a result of prostatic carcinoma in the same age groups. The mean age for benign and malignant lesions was 70.2 years and 72.1 years respectively, this is explained by Bhatta. & Hirachan (6), which might be due to Advanced age and hormones like androgen are the elements associated with prostatic disorders. There was no significant difference in the mean age between patients with benign and malignant lesions (p-value 0.40). This finding is in agreement with the study done by (12).

In the current result, lower urinary tract symptoms (obstructive symptoms) especially urine retention was the most common symptom in benign lesions in (61.9%) followed by a combination of symptoms (obstructive and irritative) like urine retention and dysuria in (24.8%), hematuria in (3.1%). LUTS might be due to, the hypertrophied transition zone obstructing the distal part of the prostatic urethra, so BPH might cause compression on prostatic urethra leading to urine retention and other LUTS (14). Dysuria occurs because of the inability to empty the bladder completely creates a reservoir of residual urine that is a common source of infection, or as symptom of prostatitis which is commonly accompanied by BPH (15). Enlarged prostate noticed in (8.8%) cases. In malignant lesions, common symptoms were hematuria in (29.4%) followed by a combination of symptoms (obstructive and irritative) such as urine retention and frequency in (23.5%). Hard prostate seen in (29.4%) cases. Because the majority of PCa arises in the peripheral zone, most distant from the urethra, sphincter, and neurovascular bundle, it would need to be quite advanced to give rise to urinary tract symptoms (16).

However, when both the lesions were compared to urine retention and enlarged prostate were positively associated with benign lesions, while hematuria with hard prostate was significantly associated with malignant lesions (p-value 0.000). The hematuria could be due to urinary infection, vascular enlargement of the prostate as well as friable hypervascularity of the prostate, the vessels are easily disrupted by physical activity (17). Premalignant lesions had the same clinical symptoms as seen in benign lesions as they were mostly associated with benign lesions. Anushree and Kusuma (18) found that frequency was the most common symptom in benign cases accounting for (36.6%) followed by acute retention (22%), while in the malignant cases, they found frequency (38.5%), and incomplete voiding (38.5%) as the most common symptoms.

Most patients above the age of 50yrs were have been histological evidence of BPH and many suffer symptoms from urethral obstruction. Data show that on microscopic examination both stroma and epithelium are involved in variable degrees and the predominant pattern is glando-stromal hyperplasia (18). In the present study, the glando-stromal pattern of BPH (86.8%) was the most frequent histological pattern which predominant, this result was in agreement with a study done by (3), and is different to other study done by (12) who noticed Stromal predominance was encountered more common followed by glandular predominance. Papillary hyperplasia was the most common observed epithelial hyperplasia by (147) cases, accounted (75.7%) of prostatic lesions. The incidence of atypical adenomatous hyperplasia in the current study has been seen in (4.37%) which correlates the finding of (1.65%) by a study done in the USA (4).

Benign prostatic hyperplasia (BPH) was the most common frequent lesion seen in this study similar to Bhatta & Hirachan study (6). BPH without microscopic association account about (51.87%), while prostatitis was a common associated finding with BPH accounting (30%). This finding is similar to a study by (6) who found that prostatitis accompanied in (25%) of BPH cases. A study by (12) has identified a higher incidence of prostatitis (86%). This correlation between BPH and prostatitis, explained by Peter *et al* (19) that the inflammation is more commonly associated with benign epithelial conditions, especially atrophy and BPH as compared with high-grade Prostatic Intraepithelial Neoplasia (PIN) and carcinoma where

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usually only a small percentage of foci are inflamed. (18) explained these differences in the percentage of associated prostatitis among different studies may arise from the treatment approaches obeyed at several organizations. Anti-inflammatory drugs and Antibiotics could microscopically change the inflammatory response.

Additionally, two cases of granulomatous prostatitis were reported and diagnosed as nonspecific granulomatous prostatitis (which is negativity for AFB), this result in agreement with the study was done by (2). The accurate cause of Granulomatous prostatitis remains uncertain and may in several patients be idiopathic (5).

Squamous metaplasia can be detected at the margin of infarcts, following TURP, as an effect of hormonal management, or occasionally without recognizable predisposing etiology (3). In this study, BPH with squamous metaplasia in 12 cases (7.5%) was observed, which correlates the finding of 3 cases (0.8%) by Garg *et al* (4).

Most of the cases of prostatic carcinoma were acinar adenocarcinoma. A total of 31 (91%) cases of acinar adenocarcinoma were identified in this study. This is in agreement with the study was done by (18), with 12 (85.1%) of adenocarcinoma cases were reported.

In the present study, Gleason Scoring of adenocarcinomas showed that moderately differentiated adenocarcinomas (GS 7) comprised the largest group with 12 cases (38.7%) which consist with the studies done by (12 & 18), that indicate poor prognosis; this might be because of a delay in accessing the health facility, medical advice, and no screening program were done. Gleason score 9 was the frequent score observed in a study done by (6).

Perineural invasion is characteristically diagnosed in prostatic carcinoma cases if there is intraneural or circumferential infiltration by the malignant cells (6). Among the 34 cases reported as prostatic carcinoma perineural infiltration was seen in 2 cases. One case had Gleason score 7 and the other was ductal carcinoma. One of the studies (6) has described the perineural invasion in 3 cases. The vascular invasion also seen in 2 cases, lymphatic in one case. This is maybe because of the early diagnosis of prostatic carcinoma.

Moreover, various histopathological findings were noted in benign and malignant lesions, in benign cases, papillary hyperplasia was the most common observed epithelial hyperplasia in (75.77%) cases, which was similar to study done by (5) who found that, papillary hyperplasia was the most frequent epithelial hyperplasia by (34%). The common malignant patterns in this study were a cribriform and acinar pattern in (7.7%) cases, cribriform and sheets in (3.1%) cases, and acinar patterns are also seen in (3.1%) cases. This was disagreement with (12) who found that, sheeting pattern as the most predominant pattern.

Because the current study is record-based and not a population-based study, like various studies. It might not be an exact indicator of the true incidence of prostatic diseases in society at large.

5. CONCLUSION

In conclusion, prostatic lesions are commonly faced above the age of sixty years with a predominance of benign over malignant conditions. Benign prostatic hyperplasia (BPH) was the most common frequent lesion in benign case, prostatitis was usually accompanied. Prostatic adenocarcinoma was the most frequent lesion among malignant cases, the greater part of the patients encountered was of a Gleason score (GS 7). We reported cases of premalignant conditions (AAH) which require a cautious follow-up.

TURP and open prostatectomy were the procedure of choice in this study for benign lesions. Whereas, needle biopsy had more advantages than TURP in detecting malignant conditions, as it samples the posterior lobes (peripheral zone), which are usually affected by malignancy.

There is a major difference in symptoms between prostate cancer and benign conditions affecting the prostate such as benign prostatic hypertrophy (BPH) and prostatitis, where urine retention was a common presentation in benign cases in comparison to hematuria which was the frequent presentation in malignant cases, although urine retention was also recorded in malignant conditions in a small percentage.

One of the limitations of this study was that we didn't cover the aspects of risk factors such as family history, obesity, metabolic diseases, and environmental factors. We made all attempts to ensure that the data collected was reliable and the methods were reproducible. Our study opens the forum of discussion and should be continued in a more advanced and modified phase.

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