

Although 12 a small  
number of patients



Although ultrasound guided prostate biopsy is the gold standard, well tolerated and the most common procedure used in the diagnosis of prostate cancer, but due to limited financial resources still transrectal digital guided prostate biopsy is used as diagnostic tool in all the tertiary care hospitals of Khyber Pakhtunkhwa. Although we do not come across complications most of the time yet it's not a harmless procedure. One of the most common complications is:

e. perineal pain is noticed in more than 70% of patients and the frequency is still on the increasing side due to increase in the number of biopsy chunks<sup>5, 6</sup>. Undesired events, such as local pain, hematuria, hematospermia, dysuria, and rectal bleeding have been reported in a large number of patients. Hematuria after biopsy has been reported in up to 60% of cases whereas the frequency of haematospermia is also more or less equal to hematuria<sup>i. e. 64%</sup><sup>7</sup>.

Rectal bleeding is also one of the common complications reported in 75% of patients and very rarely 1% patients suffer from massive rectal bleeding requiring blood transfusions up to 5 pints<sup>8</sup>. In vast majority of patients rectal bleeding is self-limiting and not bothersome. Unlike hematuria and rectal bleeding haematospermia has a transient detrimental effect on sexual activity.

A short term exacerbation of lower urinary tract symptoms has been reported in 6 to 25% of patients with a reported incidence of 4% urinary retention cases.<sup>9, 10, 11, 12</sup> A small number of patients also complain of transient erectile dysfunction which reverses by itself after 1-3 months without any

medication<sup>13</sup>. Infection is one of the adverse complication represented by prostatitis, epididymitis, Prostatic abscess and sepsis.

In order to minimize these complications use of prophylactic antibiotics are used as standard of care. <sup>14, 15, 16, 17</sup> Ciprofloxacin is the drug of choice since long time because of the broad spectrum activity and high concentration in prostatic tissue. As the resistance to ciprofloxacin's is on rise so some of the surgeons are using multi drug prophylaxis <sup>18</sup>. Fever associated with genitourinary symptoms is described in 3-10% and septicemia in 5% of patients following a biopsy of the prostate.

Despite agreement on antibiotic prophylaxis, the timing, duration of the regimen, and the route of administration remain controversial. Commonly an antibiotic regimen of at least 3 days has been used. Despite the use of prophylactic antibiotics, the development of infectious complications after biopsy remains possible, although its incidence is low. For this reason, a cleansing rectal enema has been used by some of urologists as a means to reduce infectious complications. Most investigators believe that rectal preparation reduces the rate of bacteremia. In a prospective randomized study, Lindert et al.

proposed that bacteremia might be minimized by a prebiopsy enema. In their study, bacteremia following prostate biopsy occurred in 4% (1 of 25) of patients who had prebiopsy enemas compared with 28% of those who did not. This study therefore provided a theoretical basis for using a prebiopsy rectal preparation for the prevention of infectious complications. While searching international literature it is evident that a minority of patient's i.

e 1. 1-1. 4% require hospitalization secondary to sepsis whereas in our study . 2% required hospitalization in non-rectal prepared group and none of the patient developed sepsis in the rectal prepared group<sup>19</sup>. Even with use of prophylactic antibiotics still infection chances are there which can be reduced by using povidone iodine rectal swab preoperatively.

When Povidone-iodine rectal prophylaxis was combined along with use of antibiotics as compare to the only use of antibiotics significant difference was there with combination therapy. <sup>20</sup> The use of povidone-iodine is well known in surgical practice and is based on the fact that povidone-iodine has broad-spectrum antimicrobial activity, including viruses , fungi , and parasites, as well as anti-inflammatory activity. Povidone-iodine is an antiseptic solution extensively used in different concentrations. Allen et al reported 97% decrease in the colonies after using povidone iodine rectal swab where as in our study the result was even more significant with 99% decrease in colonies<sup>21</sup>. Borghesi et al showed that parenteral piperacillin in combination with a povidone-iodine enema significantly reduce the incidence of infectious complications<sup>22</sup>. A meta-analysis of eight studies reported by Walker et al showed a significant decrease in the incidence of bacteriuria and sepsis after prostatic biopsy<sup>20</sup>. Intraoperative preparation of the rectum with a povidone-iodine-saturated gauze during trans rectal biopsy of prostate decreased the incidence of bacteriuria and bacteremia.

We counted bacterial colonies in the rectum that had been harvested from rectal swabs before the insertion of povidone-iodine and after biopsy to evaluate the bactericidal effects of povidone-iodine. We found that the bacterial colony counts before the rectal preparation were decreased

dramatically after biopsy. These local antiseptic method seems to be one of the cheapest method to decrease the incidence of infectious complications. The data obtained from our study shows that povidine iodine rectal swab is reliable in preventing infection.

Other anti-infectious enemas increase patient cost. The cost of povidone iodine swab is very low. .

After our prospective trial with iodine swab considered, we conclude that the povidone-iodine swab is important to protect against infectious complications in patients undergoing biopsy of the prostate.