INTRODUCTION:
Pelvi-ureteric junction (PUJ) obstruction is defined as a partial or total blockage to urinary outflow from the renal pelvis into the proximal ureter causing dilatation of the collecting system and potentially progressive renal damage, if left untreated. Pelviureteric junction obstruction (PUJO) is the most common cause of pediatric hydronephrosis. Ureteropelvic junction (UPJ) is the most common site of obstruction in the upper urinary tract and account for 80% of cases. Although the malformation is believed to be congenital, its actual dysfunction may manifest at any time from intrauterine life to old age. The UPJ obstruction does not represent a single anatomic entity, but rather a set of obstructive processes that result from multiple etiologic factors. It is common on left than right side is more common in male than female. Ureteropelvic junction obstruction can be congenital or acquired as a result of some diseases such as stone, urethelial tumours, or previous surgery. Neonates and infants usually present with palpable flank mass while older children and adults commonly present with intermittent flank or abdominal pain. Obstruction in the urinary tract affects all renal functional parameters depending on the pressure gradient across the obstructed site which affects the intrapelvic pressure. The decrease in renal function over time can be easily demonstrated by serial measurement of renal uptake and relative function using technetium 99m diethyleneetriamine pentaacetic acid (Tc99m DTPA) scintigraphy. When intratubular luminal pressure increases in obstructed site which affects the intrapelvic pressure. The decrease in renal function over time can be easily demonstrated by serial measurement of renal uptake and relative function using technetium 99m diethyleneetriamine pentaacetic acid (Tc99m DTPA) scintigraphy. When intratubular luminal pressure increases in nephrons, there is increased reabsorption of salt and water and this leads to reduction in the flow of non-reabsorbable solutes like Tc: 99m DTPA through the nephrons. This leads to prolongation of Tmax (time required for maximum activity). The surgical management of a kidney with obstruction at the ureteropelvic junction has many variations with respect to approach, degree of invasiveness and timing of surgery. The objectives of surgery remain the same, i.e. to relieve the obstruction and thus preserve or improve overall renal function, and to maintain normal development, while lessening the morbidity to the patient but without compromising the surgical outcome.

Materials and methods: A retrospective review of all cases who underwent dismembered pyeloplasty during January 2014 to January 2016 at Nizam’s institute of medical sciences, Hyderabad was done. A Total of 71 cases with males and females were evaluated with respect to age at presentation, preoperative renogram and surgical details. All the cases were divided in three groups depending upon there Split renal function on DTPA renogram of the effected kidney as Group 1 with SRF of less than 30,(16 cases) Group 2 with SRF of 30-40,(26 cases) and Group 3 with SRF of more than 40,(29 cases). All cases were followed with maximum follow up period of 12 months with DTPA renogram at 3, 6, and 12 months. Preoperative and postoperative split renal function on renogram has been compared to assess the outcome.

RESULTS: Mean age of the patients was 27.04 years. Median age group was 25.5years with a range of 2 to 70 years. Mean pre op split function is 33.6% and mean SRF% of group 1 (group 1) 3.6(16), group 2 (group 2) 3.6(26) and group 3 (group 3) 3.6(29) patients were 20.76%, 34.99% and 45.33% respectively. P value among these groups was 0.01 which was significant. p value among these groups were 0.02 , which was significant. Mean postoperative SRF was 38.6% (SD ±12.7). The mean postoperative SRF% are 24.83% in group 1, 41.05% in group 2 and 50% in group 3. t test showed a p value of 0.014, which is a significant increase in postoperative function.

CONCLUSION: We hereby, report that after pyeloplasty, significant improvement can be expected in most kidneys with impaired SRF, especially if the initial SRF is between 30 and 40%.
have been tested that could have a significant effect on the renal function outcome. The factors included the patient age, preoperative SRF, serum creatinine, and GFR etc.

In our study the success rate achieved with the Anderson-Hynes technique is comparable to those reported worldwide.14-16 When considering symptoms, 65 (91.54%) patients were asymptomatic clinically post operatively. The success rate in our study is similar to that of a retrospective review involving 111 patients with UPJ obstruction undergoing open surgical repair over a 15-year-period, by Clark and Malek (1987), who found a 95% success in resolution of clinical symptoms and 91% success in decompression of pelvi-calycal system on urography following one surgical repair.17 The success rate in our study i.e., patients with severely impaired function (SRF <30%) had a 5.88% increase in baseline function, which is less when compare with group B and group C when they are combined. This increase is not considered significant given the variation in DTPA renogram. Similar findings are reported by Niemczyk et al. They reported that patients with renal function greater than 35% demonstrated functional improvement after surgery and that none of the patients with renal function less than 30% showed postoperative functional improvement. In the present study, 6 of 16 (37.5%) patients who had initial SRF < 30% showed significant improvement (>5%) of a function, while 28 of 55 (50.90%) patients with initial SRF >30% showed an improvement of >5% of split renal function from base line. In the present study there was an average increase of 6.05% above baseline in the patients with moderately impaired split renal function (group 2). The 26 patients in group 2, 17 patients (65.38%) had significant improvement during our study. Similar results have also been observed by Castagnetti et al.18,19 where improvement in renal function was greater in patients with moderately rather than severely impaired preoperative function. The same result was also reported by Almodhen et al.18,19 in their series none of 49 patients with baseline SRF greater than 45% achieved more than 5% improvement postoperatively compared to 43% with baseline SRF less than 45%, who achieved greater than 5% improvement. This could be explained by the fact that in patients with lower baseline SRF there is more space for the kidney to recover than in those with better baseline SRF. However, Chandrasekharam et al.17 reported that kidneys with initial SRF below 30% showed significant improvement than the kidneys with initial SRF over 30%. An initial SRF over 40% was associated with little or no improvement. Niemczyk et al.14,15 reported that patients with renal function greater than 35% demonstrated functional improvement after surgery and that none of the patients with renal function less than 30% showed postoperative functional improvement. In contrast, we found a high improvement in patients who had initial SRF greater than 30% compared with those with less than 30%. In our study there was an average increase of 4.77% above baseline in the patients with split renal function over 40% (group 3). 11 of 29 patients (37.93%) in group 3, who had an SRF over 40%, showed functional improvement. It is found that 18 patients who had not had >5% increase of SRF from the baseline had maintained their renal function. None of the patients showed any deterioration in split function. This finding can also be seen in some studies which have suggested that affected kidneys with good SRF at the time of diagnosis are less likely to manifest deterioration of renal function after surgery. In contrast, Mc Aleer et al. showed that renal function did not improve after pyeloplasty regardless of the initial level of renal function. But in this study, mean SRF was 41% and it may explain their conclusion. Salem et al. also observed that only kidneys with impaired preoperative function were associated with greater degrees of improvement after surgery. But they did not define a cutoff value for SRF improvement. Gupta et al.(16) reported a drop in the success rate from 93% to 54% when the preoperative split function was more than 40% versus less than 25%. O’Reilly and associates14 demonstrated that the greatest potential recovery often will be found in patients with the greatest pre-existing functional deficit. At decompression, the parenchyma regains a more normal disposition and recovers useful function. Also, follow up in our preliminary study is short. However, there is no universally agreed protocol and minimum duration of follow-up in patients with UPJO

Discussion:
Since the first description of pyeloplasty in late 19th century there is a considerable debate in the literature about the functional outcomes of pyeloplasty, the factors influencing the outcomes and optimal split renal function to consider surgical management. Calculation of absolute renal function values such as GFR is more accurate but renal function to consider surgical management. Calculation of pyeloplasty, the factors influencing the outcomes and optimal split renal function values such as GFR is more accurate but renal function to consider surgical management. Calculation of
after surgical intervention. Madi et al identified 3 late failures in a recent retrospective study. However, all patients had normal imaging at 1 year postoperatively and all presented with symptoms at the time of failure. The authors concluded that short follow up should be interpreted. Most studies, however, suggest that recurrences after pyeloplasty usually occur within 12 months. The histopathological results in our patients showed submucosal fibrosis and thickening, and muscle hypertrophy, these histological findings are similar to those found in congenital ureteropelvic obstruction as described by Starr et al. Allen.

Conclusion:
We believe that surgery should be considered when the diuretic renogram suggests obstruction regardless of the renal function. Because surgery can relieve the symptoms even when the split renal function is >40%. Split renal function improved by more than 5% in 47.88% of patients. Renogram measured drainage half times improved by more than 10 min in 83.09%. After pyeloplasty, significant improvement can be expected in most kidneys with impaired SRF, especially if the initial SRF is between 30 and 40%.

References