



Histopathological Pattern of Kidney Biopsy of Diabetic and Non-diabetic Bangladeshi Subjects with Nephrotic Range Proteinuria and their Short-Term Treatment Outcome

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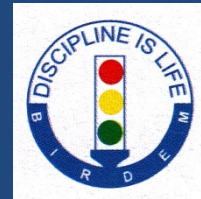
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- Introduction & Aim
- Methods
- Results
- Discussion
- Limitation & Recommendation



- **Introduction & Aim**
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- Glomerular disease is a common cause of end stage renal disease.
- Glomerulonephritis is the dominant cause of CKD (67.2%) followed by diabetes (24%), hypertension (4.8%) and others (4%).¹

Mskabir,PK Dutta,Mnislam.Prevalence of risk factor of CKD in adults.Mymensingh

2012 Oct;21(4):605-10.

- The prevalence of glomerular disease is different ^{2,3}
- The two basic types of glomerular disease.

Chang JH, Kim DK, Kim HW, et al. Changing prevalence of glomerular diseases in Korean adults: A review of 20 years of experience. *Nephrol Dial Transplant* 2009;24:2406-10.
[Carvalho E, do Sameiro Faria M, Nunes JP, Sampaio S, Valbuena C. Renal diseases: A 27 year renal biopsy study. *J Nephrol* 2006;19:5007.

2. Zhou FD, Zhao MH, Zou WZ, Liu G, Wang H. The changing spectrum of primary glomerular diseases within 15 years: A survey of 3331 patients in a single Chinese centre. *Nephrol Dial Transplant* 2009;24:870-6.



- Nephrotic syndrome has diverse aetiology.
- Its prognosis also differs according to cause.

Aims



- To observe the histopathological pattern in patients with nephrotic range proteinuria in both diabetic and non-diabetic group
- To evaluate the treatment outcome at end of 6 months in both group



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- Type of study: Cohort study
- Place of study: BIRDEM, Dhaka, Bangladesh
- Duration of study: June 2013 to July 2016

Inclusion criteria



- Nephrotic range proteinuria (24 hr UTP > 3.5gm/day) with or without active urinary sediment
- Both diabetic and non-diabetic patients
- Those who had minimum six months follow up
- Consent for biopsy

Exclusion criteria



- Patients with diabetic nephropathy



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Demographics:

Total : 27, Diabetic : 13, Non-diabetic : 14

Trait	DM (N=13)	NDM (N=14)	p value
M : F	6 : 7	6 : 8	> .05
Mean Age (years)	50 ± 13	39 ± 13	< .05

Co-morbidity

Hypertension (DM 8/10, NDM 3/10)

Hypothyroidism (DM 1/3, NDM 2/3)



Indication of biopsy

- Active urinary sediment : 67% (Equal in both group)
- Unexplained acute kidney injury : 41%

Trait (N=11)	DM (N=08)	NDM (N=03)	p value
AKI	72%	27%	<.05

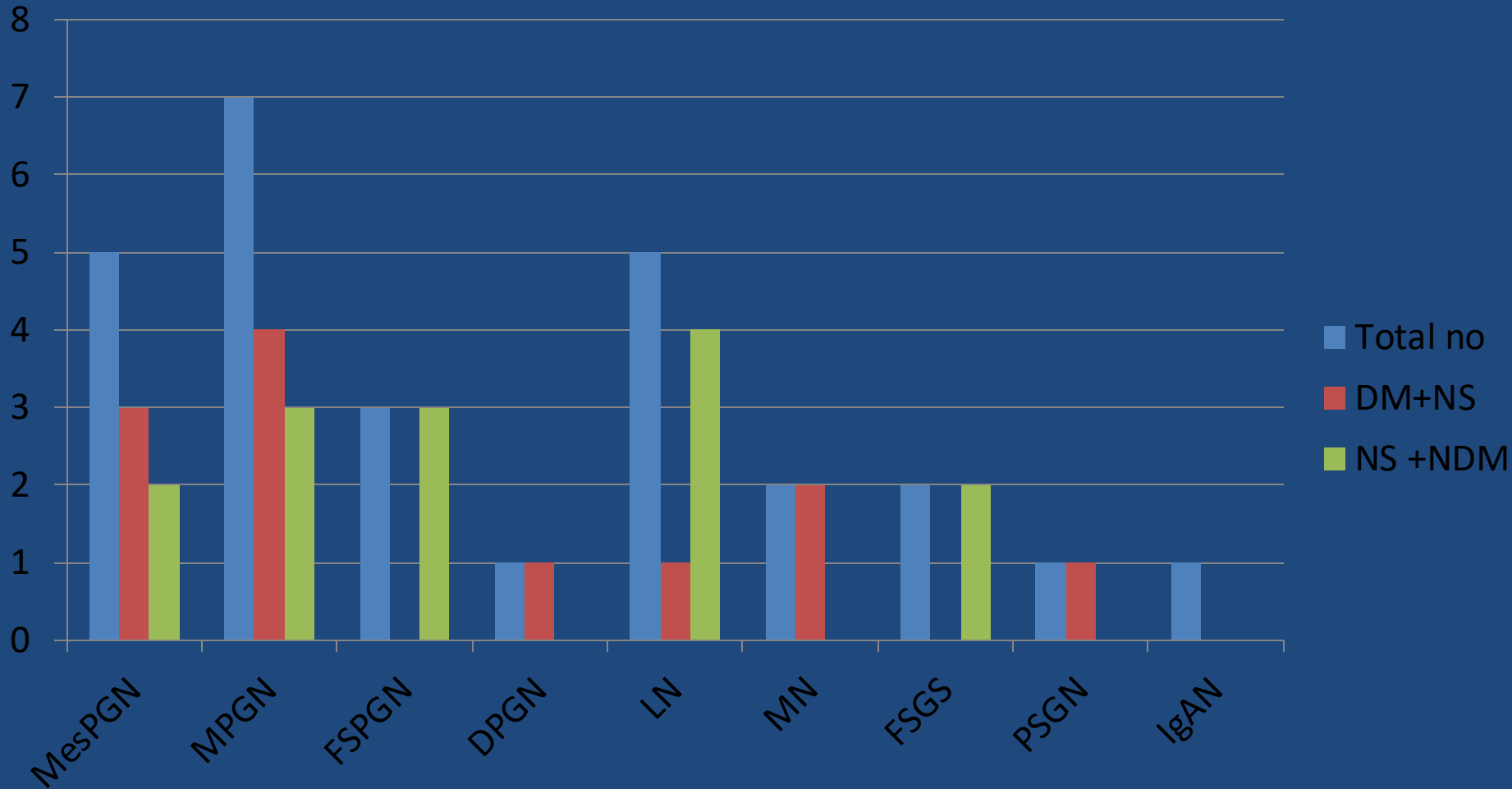
- Absence of retinopathy in DM : 69%



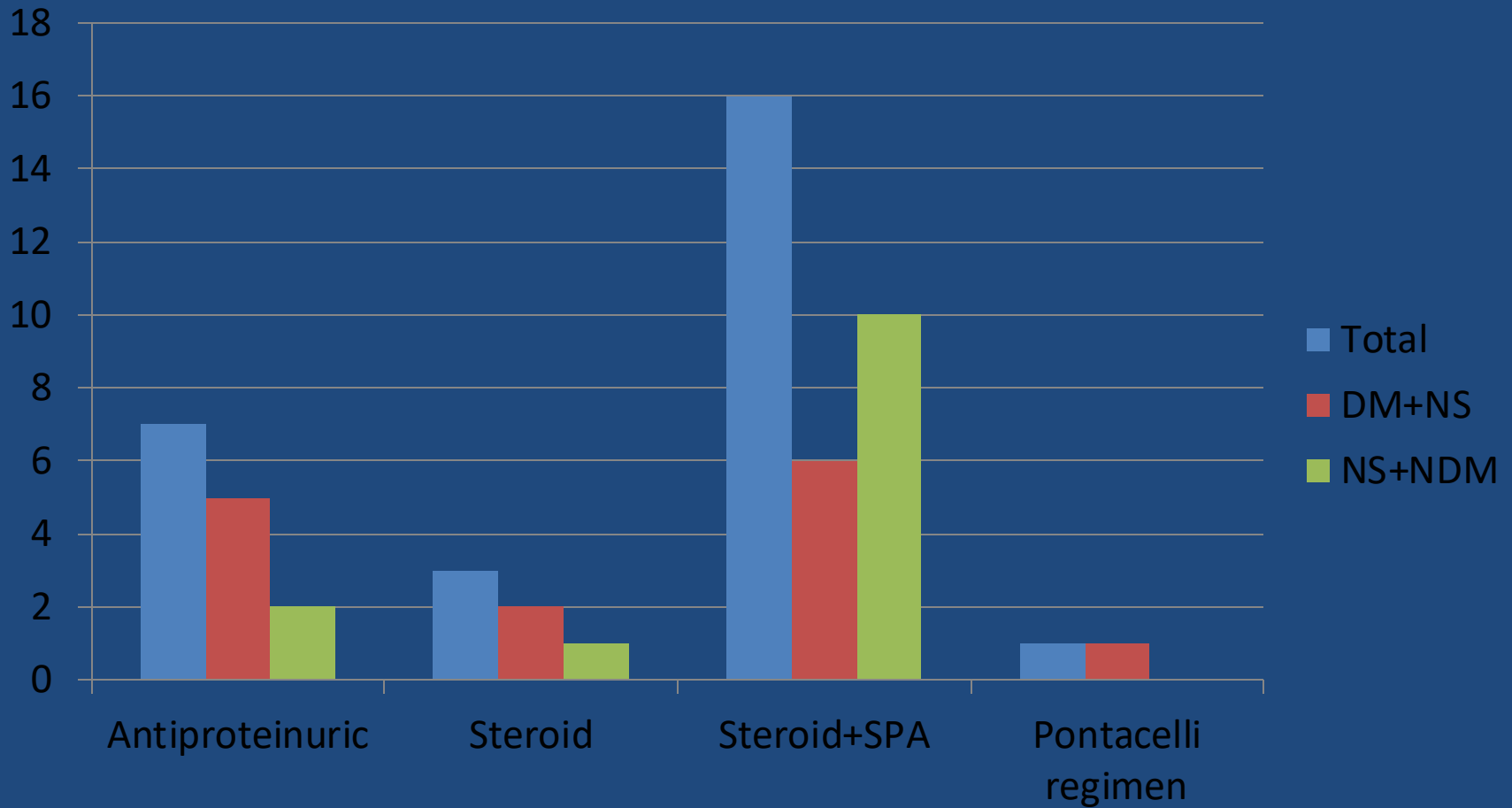
- 24 hr urinary total protein(UTP):

UTP(gm/dy)	DM (N=13) %	NDM (N=14) %	p value
< 7	44	55	>.05
7-10	11	
>10	83	16	<.05

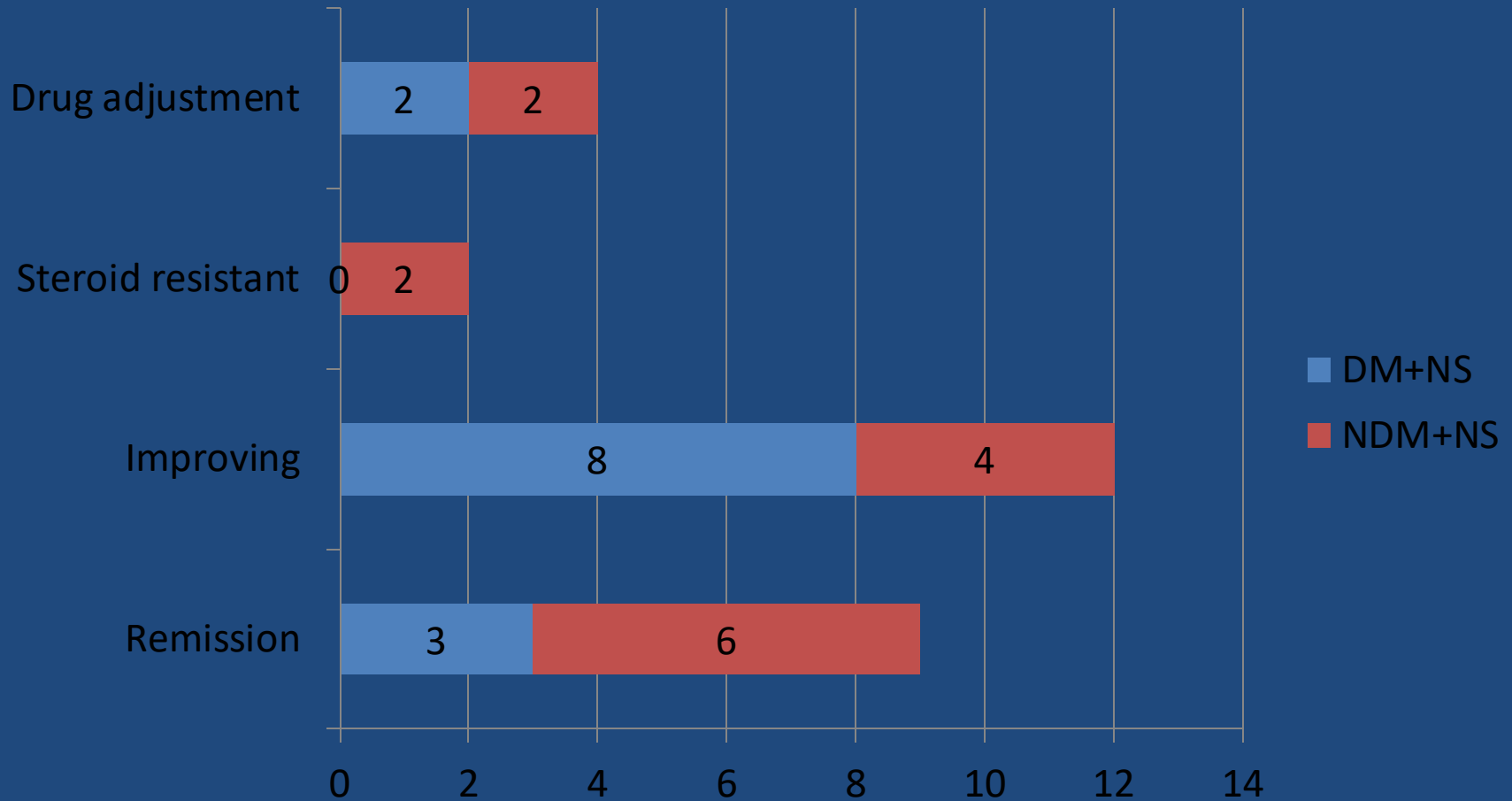
Histopathological pattern of nephrotic proteinuria in diabetic and non-diabetics



Drugs prescribed in both groups

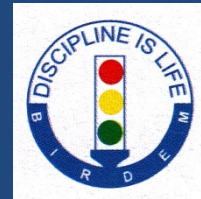


Outcome of diabetic and non-diabetic population





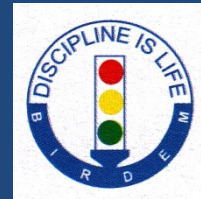
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- The majority of study subject who underwent renal biopsy were in age group of 41-50 years. (Mundi et al⁶)

Younger patients were observed to have nephrotic range proteinuria in NDM group

- AKI and UTP > 10 gm/24 hr was seen more in DM group
- Lupus nephritis in NDM group
- MPGN was more prevalent in DM group.



- At 6 months of treatment overall remission was 33%
- No statistically significant difference was seen in both groups



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- Single tertiary care hospital based study, small number of patients



BIRDEM General Hospital



- **Further study** – multiple centers, large number of study participants and long term follow up would provide a more representative picture in this regard from Bangladesh
- It is necessary to maintain a central biopsy registry

Thank You All



