

# RENAL AMYLOIDOSIS

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## SUMMARY

*Amyloidosis is not a single disease entity rather it is a family of different diseases having multisystem involvement. There are several causes of amyloidosis having different frequency in the world. In the west, amyloidosis is mainly A.L. type and hence affects elderly population. Secondary amyloidosis (A.A.) is rare and commonly due to inflammatory bowel diseases or rheumatoid arthritis. We conducted a cross sectional hospital based study at the Department of Medicine Hayat Abad Medical Complex Peshawar 19998-2001. In our setup post T.B. bronchiectasis was the commonest cause of amyloidosis and most of our patient are young. Males were more commonly affected as compared to females. A.L. amyloidosis was very rare. A larger community based study is needed to explore the epidemiology of amyloidosis as it affects the bread earning population of our society.*

## INTRODUCTION

Amyloidosis is a rare disease and is due to variety of causes.<sup>1</sup> The hallmark of amyloidosis is extra cellular deposition of acellular fibrillary amorphous material,<sup>2</sup> which has characteristic staining property with Congo red.<sup>3</sup> The epidemiology of amyloidosis in our setup is different from the western world. We did a cross sectional hospital based study of 20 cases of renal amyloidosis at the Department Of Medicine P.G.M.I. Hayat Abad Medical Complex from 1998-2002 to find out age, sex

distribution and the underlying cause of renal amyloidosis.

## MATERIAL AND METHODS

History, physical examination and baseline investigations were done for all cases. Relevant investigations e.g. skeletal survey, protein electrophoresis, Bence Jones proteinuria, lymph node biopsy, sputum A.F.B. etc was done in selected cases. An informed consent was obtained from all the patients undergoing a kidney biopsy. Exclusion criteria were single kidney, hydro-

nephrosis, bleeding diathesis, which could not be corrected, and age less than 10 years old. A kidney biopsy obtained via monopty needle [Bard Ltd U.K] under local anesthesia and under ultrasound guidance.

## RESULTS

The total number of cases was 20 who had biopsy proven renal amyloidosis. The patient age and sex distribution is shown in the table 1 and table 2 respectively. Out of 20, 16 [80%] had post T.B. bronchiectasis and had used anti-tuberculosis drugs for 6-months. 1 [5 %] case had T.B. lymphadenopathy, which did not have a sinus. 2 [10%] cases were due multiple myeloma.<sup>1</sup> [5%] case was due to long standing rheumatoid arthritis as shown in Table 3.

## DISCUSSION

The epidemiology of amyloidosis is difficult to assess because most of the cases are undiagnosed or misdiagnosed.<sup>4</sup> In the developed countries secondary amyloidosis is rare<sup>5</sup> and is usually due to inflammatory bowel diseases and rheumatoid arthritis<sup>6</sup> A.A amyloidosis due to chronic osteomyelitis and T.B. is extremely rare due to early diagnosis and treatment in the west. AL amyloidosis is the commonest cause of amyloidosis in the western world. Common causes are monoclonal gammopathy, multiple Myeloma, lymphoma etc. It usually affects elderly population in 6<sup>th</sup> or 7<sup>th</sup> decade.<sup>7</sup> Echocardiography was not done routinely but 6 cases had already done it. There was no evidence of cardiac amyloidosis on echocardiography. 8(40) cases

SEX DISTRIBUTION n= 20

Male	16 [80%]
Female	4 [20%]

TABLE - 1

AGE DISTRIBUTION n=20

10-19 years	1 [5%]
20-29 years	10 [50%]
30-39 years	6 [30%]
40-60 years	3 [15%]

TABLE - 2

were hypotensive due to multiple cases e.g. low albumen, vomiting due to uremia, heavy doses of loop diuretics. We did not do peritoneal fats aspiration or a rectal biopsy because of cost as all biopsies were sent to Agha Khan Laboratory Karachi on their own expense. In two cases we tried empirically with steroid as synacthen was not available but did not improve their blood pressure. Amyloidosis due to beta 2 microglobulin is seen in chronic renal failure patients who are on dialysis especially haemodialysis for a long time.<sup>8</sup> We did not have a single case of beta 2 microglobulin related amyloidosis as our patient survival on haemodialysis is not that longer as in the western world. In our setup where T.B. is still prevalent, post T.B. bronchiectasis is the commonest cause of amyloidosis. In contrast to the west, our study indicates that bronchiectasis affects young bread earning population of our society, which has got a serious implication on the family. Amyloidosis due to Familial Mediterranean fever is a rare cause of amyloidosis and we did not have a single case.<sup>9</sup> Another study conducted at P.G.M.I, L.R.H. showed similar results. T.B. bronchiectasis and leprosy accounted for over 52% cases of secondary amyloidosis.

CAUSES OF AMYLOIDOSIS n=20

Post T.B	16[80%]
T.B. Lymphadenopathy	1[5%]
Multiple Myeloma	2[10%]
Rheumatoid arthritis	1[5%]

TABLE - 3

Secondary amyloidosis was more common as compared to the primary.<sup>10</sup>

End stage renal failure due amyloidosis poses difficulty in renal replacement because of hypotention, cardiac arrhythmia during dialysis<sup>11,12</sup> and sever cramps. Haemodialysis and peritoneal dialysis is equally effective, with the limiting factor of extra cardiac amyloid deposition. There is 20-30% chance of recurrence in the graft but graft loss due to amyloidosis is rare.<sup>13</sup> The outcome of renal transplantation appears to be the besting patients without cardiac amyloidosis on 2.D. echocardiography.<sup>14</sup> Renal transplantation is the treatment of choice for amyloidosis with E.S.R.D.<sup>15</sup>

## CONCLUSION

This study indicates that post T.B. bronchiectasis is the commonest cause of amyloidosis. Amyloidosis affects young people in our society, which adversely affects them and their family economically. Efforts should be directed toward prevention and early treatment of T.B. in order to reduce mortality and morbidity. More studies are needed to assess its true incidence, underlying causes and clinical course of the disease.

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