The major conclusions arrived after the completion of the study are summarised as

1) The mean age of patients with MDS was younger compared to western studies and incidence of therapy related myelodysplastic syndrome was very small compared to the western population.

2) The daily intake of vegetables and fruits in the disease population was below normal and the physical activity of the patients were also below normal. How these factors could have contributed to the etiology needs to be studied further.

3) The prevalence of other autoimmune disorders in the study population of myelodysplastic syndrome was very high compared to western studies.

4) The factors that predicted a high complication rate and mortality in addition to the different unfavourable subtypes of myelodysplastic syndrome included a very high ESR at presentation, very low levels of hemoglobin at presentation, a low blood platelet count, a high Red Cell Distribution Width at presentation , a high Lactate Dehydrogenase level at presentation, a low serum albumin and a high peripheral smear blast count at presentation. Frequent need of blood transfusions and a high serum ferritin level during the followup period had a bad prognosis.

5) Most common type of myelodysplastic syndrome was RAEB-1 and RAEB-2, signifying a bad prognosis compared to the more favourable prognostic types in the western population.
IMPLICATIONS OF THE STUDY
The variables that had an independent association with adverse outcome were low hemoglobin, high ESR, low platelet count, high Lactate dehydrogenase levels, low serum albumin and high peripheral smear blast percentage. Furthermore the prognosis of patients after one year of follow up included additional independent variables like serum ferritin levels at one year and the frequency of blood/blood product transfusions and need for increased frequency of hospital admissions. These variables were easily available at low cost even to primary care physicians.

Hence we propose a easy scoring system based on the cut off value of these variables to identify high risk patients who are prone to immediate future complications. The identification of these patient is important as we can channel resources to concentrate more on these patients to prevent mortality and morbidity in this subgroup. This can be used in addition to the prognostic significance of the various standard subtypes of myelodysplastic syndrome.

One point can be given each for

1) Hb <10g%
2) ESR >100 mm/hr
3) Platelet count < 1,00,000/ml
4) LDH >500 IU/L
5) Serum albumin <3.5g/dL
6) Peripheral smear blasts >10%
If the total of the sum in a patient presenting with myelodysplastic syndrome is greater than 4, the patient has more than 80% chance of having a major complication in the immediate future. When these prognostic variables are combined with the subtype of myelodysplastic syndrome, the prognostic significance can be further improved.

After 1 year of diagnosis of the disease, three other independent variables can be added to further prognosticate.

One point each for

1) Needing in hospital admission > 12 per year.
2) Frequency of blood/blood product transfusion of > 5 units per month
3) Serum ferritin after one year of diagnosis >1000 ng/ml.

If a patient has a score of greater than 6 out of 9 points, it indicates a bad prognosis of the patient in the immediate future period with more than 80% of the patient showing such a trend.

The above investigations are relatively simple and cheap and can be used to reasonable prognosticate patients with any type of myelodysplastic syndrome.
LIMITATION OF THE STUDY
During the study, cytogenetic studies and genetic profiling of the patient was not done. IPSS score could not be applied due to the lack of cytogenetic studies. Even though economic constraints were there, we found it useful to use low cost investigations available throughout the country even in primary care centers, to predict the course, complications and mortality rate of patients diagnosed with myelodysplastic syndrome.