

DEPARTMENT OF BIOTECHNOLOGY

EXTENSION ACTIVITIES

Session 2019- 2020

Programme I

As a continuous programme of the department, this year (2019-2020), we have selected our own College campus for assessment of population of Durg, and Jamgaon- R (a village) to screen population suffering from Sickle Cell Anaemia. Surprisingly, we found maximum frequency of Sickling from Jamgaon – R (17%), a highest data in our study till date.



Fig. showing Sickle Cell Anaemia Screening Programme organized at Jamgan- R & Department of Biotechnology, Govt. V.Y.T. PG. Auto. College, Durg, Chhattisgarh.

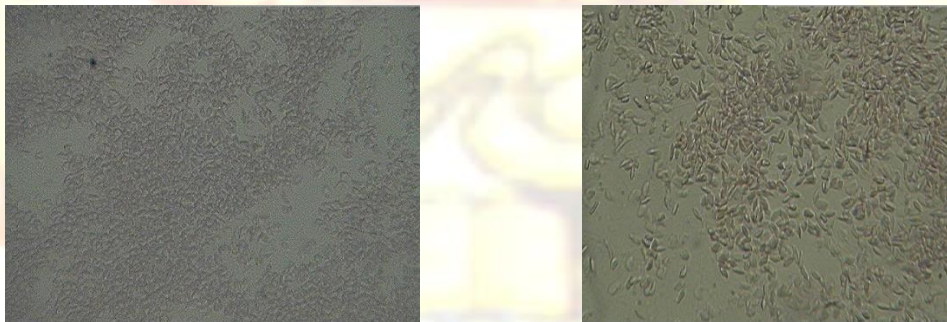


Fig. Showing sickle-shaped RBCs.

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- **Programme II**

Understanding of Glucose-6-Phosphate deficiency among population is also our continuous extension programme and this year we selected village Jamgaon-R. We continued analysis of its genetic variant and related support to sufferers like previous years.



Fig. showing Sickle Cell Anaemia Screening Programme organized at Jamgan- R.

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▪ **Programme III**

Under this programme we selected to detect Chemokine receptor gene among population of Sickle Cell Anaemia which is one of the major factors for painful condition of inflammation. We considered Durg and Kawardha District for the study.

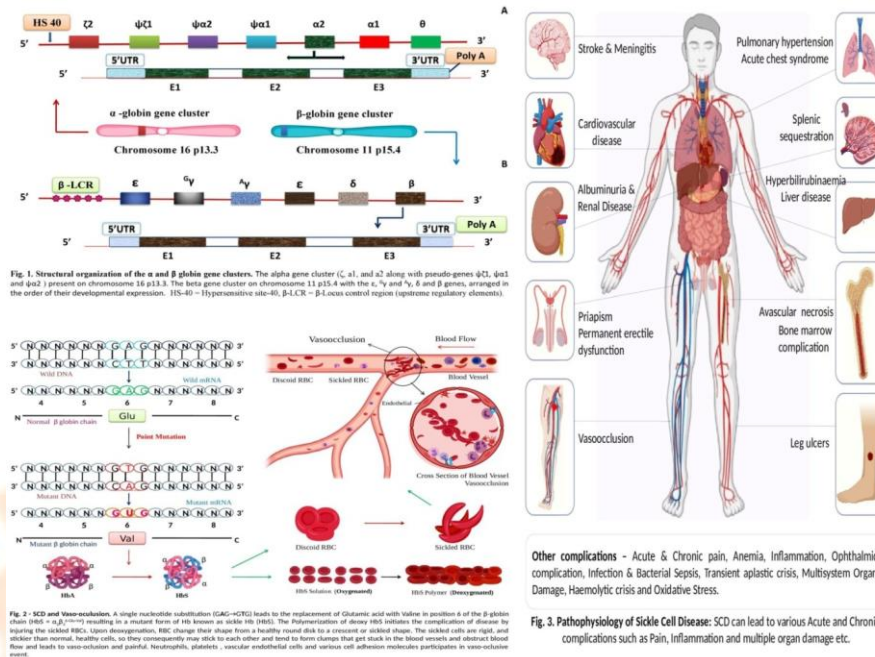


Fig. Impact of Sickle Cell Disease on different organs mediated through cytokine receptors: A Genomic Study.

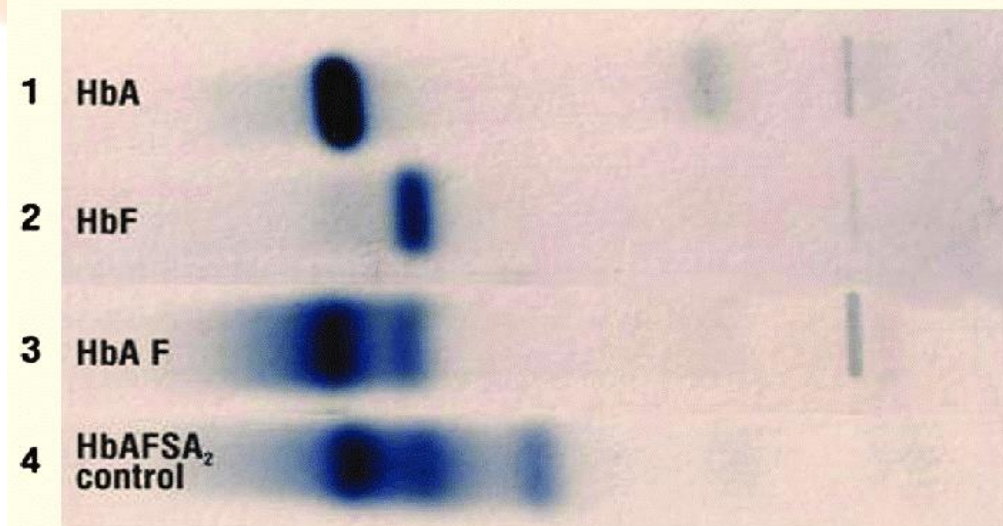


Fig. Alkaline Gel Haemoglobin electrophoresis showing chemokines in sickle patients.

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- **Programme IV**

Evaluation of Arsenic contamination and its adverse impact on health of population in Ambagarh chowki area was our continuous extension programme for session 2019-2020 also. We found various pathogenic impact of Arsenic on population and created awareness among them.



Fig. showing Leucomelanosis in human populations of Kaurikasa Village of Chhattisgarh affected with Arsenicosis.

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- **Programme V**

This year we selected Shivnath River from Durg to Rajnandgaon for its physico-chemical and biological parameters to understand impact of environmental alteration and related feasibility of its hazard to dependent Human population.



Fig. Showing sample collection from Shivnath River



Fig. Showing pollution status of Shivnath River




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