SUMMARY AND CONCLUSION

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The present work aimed to evaluate the neutrophil function, through 2 of its aspects, in neonates and other age groups. These 2 aspects were the phagocytic and killing functions. The former was tested against candida albicans in pooled adult serum. Results of this function were expressed as percentage of phagocytosis and phagocytic index. The second function was tested by observing the lytic activity of lysozymes on the lyophelised micrococcus lysodecticus. Results were expressed as lysozyme score. This work also aimed to study the correlation between the different parameters to detect any functional relationship. Correlation between neutrophil count and function was also investigated.

The study was carried out on 88 cases including 23 preterms, 25 fullterms, 30 infants aged 3, 6, 12 months old, and 10 adults. All cases were subjected to thorough clinical apprasial to exclude factors that may influence their neutrophils function. Data were collected and analysed statistically. The following conclusions were reached:-

- The highest value of absolute neutrophil count was shown in the first week of life and then declined throughout the first year.

- Immaturity of the neutrophil phagocytic function was persistent throughout the first year of life when compared to the adult one. Preterms neutrophil dysfunction was similar to that of the fullterms.

- Killing function studied through the lysozyme activity was also proved to be immature in the first year of life. The dysfunction was similar in both preterms and fullterms.

- There was a significant correlation between percentage of phagocytosis and phagocytic index. They were 2 aspects of the phagocytic function.

- No correlation was proved between the phagocytic and the killing functions. The 2 functions were independable.

- No correlation was proved between the phagocytic function of the neutrophils and their count.

- No correlation was proved between the killing function of the neutrophils and their count.

In this work, unfortunately, we could not know at what age the immaturity of neutrophil function, observed in the first year of life, could reach the adult level. It is therefore recommended to carry out the same study on further age groups.