FIBRO - LIPOMA IN AN ASIAN ELEPHANT (*Elephas maximus*)

B. Gangadharan[1], K.N. Muralidharan Nair[2], K. Chandrasekharan[3], and T. Leenadevi[4]

SUMMARY

A fibro - lipoma observed in a female Asian elephant was placed on record.

INTRODUCTION

Neoplasms are rare in elephants. Perusal of the available literature revealed only a report of fibro - papilloma in the vagina of a female Asian elephant (Robinson and Meire 1977). Hence a tumour, Fibro - lipoma encountered in an Asian Elephant is placed on record.

CASE HISTORY

A female elephant aged about 45 years belonging to a private individual had a nodular growth under the skin in the thigh region since the last eight years and the growth showed progress increase in size and reached the size of an inflated football. Surgical intervention was indicated and the growth was removed under general anaesthesia with Xylazine hydrochloride (350 mg i/m). The weight of the animal was estimated as 3500 kg and the animal attained anasthesia within 45 minutes and the operation lasted for 90 minutes. The tumour mass weighed 2.5kg and the wound was sutured with synthetic sutures in mattress pattern. The healing of the surgical wound was uneventful.

GROSS AND HISTOPATHOLOGY

The tumour mass was off white in colour and it was hard in consistency. Representative sample of the tissue was fixed in 10% neutral buffered formalin and sections were cut at 5-6 Micron thickness and sttained with haematoxylin and eosin. Microscopically the tumour mass revealed mainly two types of cells. Islands of round to oval cells with spherical nucleus and cytoplasm with fat globules. In certain cells the nucleus was marginated to the periphery. The other type of cells were spindle shaped with fibroblastic morphology. Bundles of such cells were seen penetrating the lipomatous collection of cells, as well as neoplastic fibroblastic cells were seen encircling groups of lipomatous cells. Based on the gross and histopathological features, the tumour was diagnosed as fibro-lipoma.

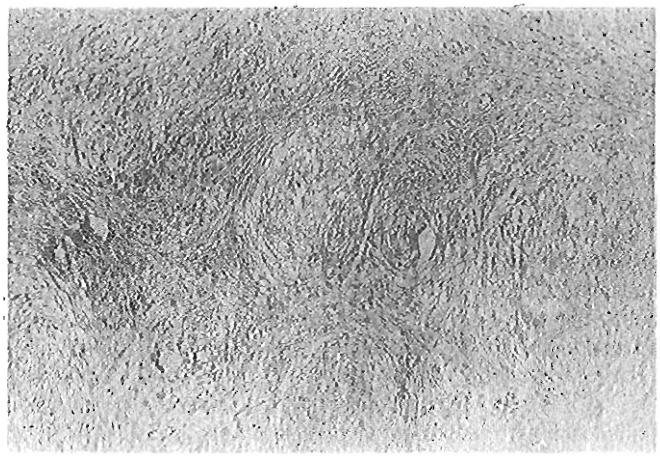


fig.1 Fibro -lipoma - Islands of Round to oval cells encircled and penetrated by spindle shaped cells

DISCUSSION

As tumours are rare in elephants, this report of fibro - lipoma in an asian elephant is placed on record. It is also interesting to note that, record of fibro - papilloma in an asian elephant was also from a female elephant.

The fibroblastic tissue in the present lesion might have resulted from the adipose tissue cells, that have lost their fat (Ewing 1940) or more likely it had developed independently from the mesenchymal cells, as an intrinsic component of the lipomatous tumour. Such two fold differentiation is not surprising, because both fat cells and fibroblasts arise from the same prototype cell (Clark and Clark 1940)

REFERENCES

Clark, E.R. and E.L. Clark (1940) Microscopic studies of new formation of fat in living adult rabbits. *Am. J. Anatomy* 67:255

Ewing, J (1940) *Neoplastic Diseases*, 4th Ed. p 197. Philadelphia and London Saunders.

Robinson, P.T. and J.E. Meire (1977) Surgical removal of a tumour from an Asian Elephant. *Vet. Med/Small Anim. Clini.* 72 (10) 1638-1640.

ACKNOWLEDGEMENTS

The senior author wish to acknowledge the help rendered by Dr. A. Rajan, Dean College of Veterinary and Animal Sciences, Mannuthy, Thrissur in confirming the diagnosis and Dr. K.M. Ramachandran, Professor and Head, Department of Pathology for the facilities provided. The authors are also grateful to Dr. K.V. Valsala, Associate Professor, Centre of Excellence in pathology for the help rendered in taking microphotograph.

[1&4] Assistant and Head, Center of Excellence in Pathology
[2] Professor and Head, Department of Parasitology
[3] Professor and Head, Department of Surgery,
College of Veterinary and Animal Sciences
Mannuthy Thrissur, Kerala.