

EPIDERMAL CYST IN THE NECK OF A KILLER WHALE

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Two killer whales with small recess in the skin on the anterior rim of the forelimb were reported by Nishiwaki (1973)*. One killer whale in Vancouver Public Aquarium showed a pair of recesses on the right and the left on the anterior rim of the forelimb and another one in Kamogawa Sea World, Chiba showed a single recess on the right side of the cranio-ventral rim of the forelimb (Fig. 1).

Nishiwaki regarded these recesses as vestigial teats in view of their sites, at the same time pointing out a high possibility of the occurrence of similar structure in other cetacea especially killer whales. Among these two killer whales with recess reported by Nishiwaki, the killer whale in Kamogawa Sea World died of liver dysfunction in July 1975 (body length 533 cm, body weight 1,600 kg, male). Autopsy performed to clarify the cause of death revealed the nature of the recess in question as a tube shaped epithelial pocket with the diameter of 5 mm and depth of 8 cm as shown in Fig. 2.

The recess enters vertically from the superficial layer into the corium and the outside of the tip is surrounded by thick and firm capsule-like structure consisting of connective tissue. The shape of the tip of the aberrant epithelium appears like an ending with alveolar and ductal branching as if blocked by the thick capsule-like external wall. The lumen of the tubular recess is filled by abraded epithelium appearing as cerumen. From the origin of the recess to the end of the surrounding tissue, no glandular structure was found at all macroscopically and histologically, and no nerve endings were found. Within the connective tissue surrounding the terminal portion of the recess, however, melanocyte-like cells were found scattered. Based on the present autopsy findings, the recess in the skin of the killer whales reported by Nishiwaki was found to correspond to the pathological picture of epidermal cyst in man. Unlike the epidermal cyst in man the recess in killer whale is characterized by the presence of melanocyte-like cells in the connective tissue surrounding the tip of the recess. No epidermal melanocytes are found in the

* Nishiwaki, M., 1973. Possible vestigial teats of killer whales. *Sci. Rep. Whales Res. Inst.*, 25: 277-278.



Fig. 1. The belly of the killer whale of a 533 cm length, male in Kamogawa Sea World. Arrow show the small recess on the cranio-ventral rim right of the forelimb.



Fig. 2. Longitudinal section through small recess of killer whale of a 533 cm length, male. Notice the lumen of recess and thick and firm capsule-like structure of connective tissue.

normal corium of the cetacea. No other reports are available on epidermal cyst in the cetacea, and the cause remains unknown. As was pointed out by Nishiwaki, however, demonstration of such cyst in two killer whales being localized in the neck would suggest the need for future observation to decide whether or not such cyst occurs frequently in killer whales.