

EXPRESSION OF CLAUDIN-1, 4 AND 7 IN RADICULAR CYST

Key words: Claudin, radicular cyst

BACKGROUND

Radicular cysts are the most common odontogenic cysts. Cyst enlargement caused by hydrostatic pressure which increased by hypertonic cyst fluid compared with plasma. Then the fluid in blood vessels is drawn into the cyst cavity along this osmotic gradient.

The structure that plays an important role to control the diffusion of fluid across the paracellular spaces between the adjacent cells is tight junction (TJ). TJ also compose of three major transmembrane proteins. One of them is Claudins, which are the major transmembrane proteins found in tight junctions of all epithelium and endothelium. There are no studies described the expression of claudin-1, 4, 7 or relationship among them in radicular cyst.

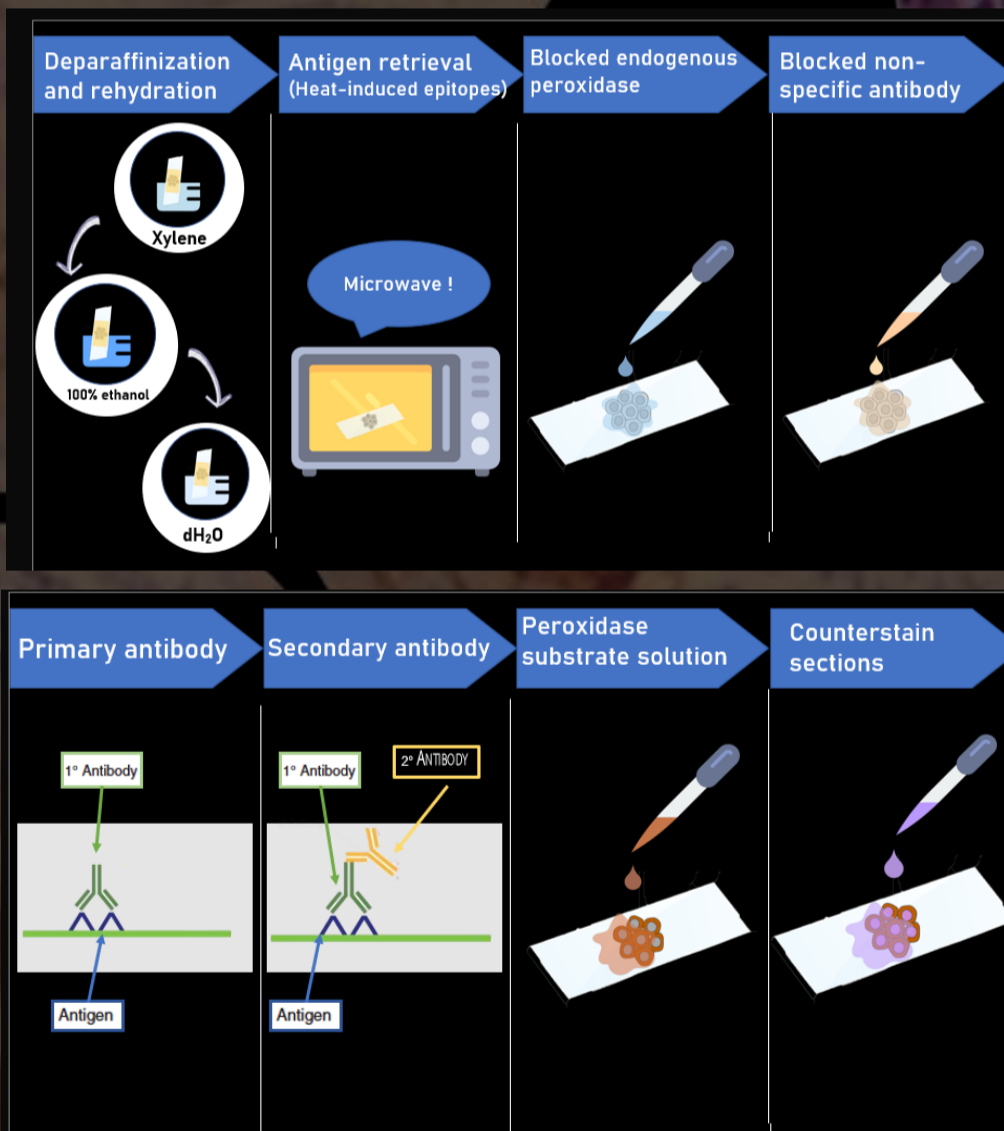
OBJECTIVE

To study the expression of claudin-1, 4 and 7 in radicular cyst.

DATA ANALYSIS

Expression of different claudins between groups were analyzed using the Kruskal-Wallis test with Dunn's test. Level of significance was at $P < 0.05$.

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MATERIALS & METHODS

30 RCs from archive of paraffin embedded specimens from Department of Oral Pathology, Chulalongkorn University were used in the study. The specimens were analyzed immunohistochemically for claudin-1, 4 and 7 expression. The staining was analyzed semi-quantitatively and categorized into 4 levels, based on the percentage of positively stained cystic epithelial cells. Only plasma membrane staining was counted as positive.

RESULT

Immunohistochemical staining of claudin-1 is mostly shown in level 4+ (n = 20, 67%) while immunohistochemical staining of claudin-4 and claudin-7 are mostly shown in level 1+ (n = 21, 70%) and level 2+ (n = 13, 43%) respectively. No difference of claudin expression was shown among radicular cyst.



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