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Ekspresi alpha smooth muscle actin (asma) dan vascular endotel growth factor (vegf) pada pasien celah langit-langit inkomplit, unilateral dan bilateral non sindromik = Expression of alpha sooth muscle actin (asma) and vascular endothelial growth factor (vegf) in non-syndromic incomplete, unilateral and bilateral cleft palate patients

Mochamad Zain Anggriadi, author

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Abstrak

Latar Belakang: Celah langit-langit merupakan salah satu kelainan bawaan yang banyak terjadi. Alpha-smooth muscle actin (ASMA) adalah actin isoform yang dominan di dalam sel-sel otot halus dan berperan penting dalam proses fibrogenesis. Diferensiasi fibroblast menjadi myofibroblast merupakan proses kunci dalam penyembuhan luka dan repair jaringan, namun berbahaya untuk fungsi jaringan apabila berlebihan seperti hypertrophic scars (jaringan parut). Dalam kesembuhan luka Angiogenesis sangat penting untuk penyediaan oksigen dan nutrisi ke sel jaringan yang terluka dan membaginya sel tumor yang memiliki kebutuhan metabolik tinggi, angiogenesis dirangsang oleh vascular endothelial growth factor (VEGF). Faktor aktivitas ASMA dan VEGF yang mempengaruhi pembentukan jaringan parut pasca tindakan yang dapat menyebabkan gangguan perkembangan maksila.
Tujuan: Dapat Mengetahui ekpresi ASMA dan VEGF pada pasien celah langit langit inkomplit, unilateral dan bilateral non sindromik.
Metode: Pada penelitian ini dilakukan studi deksripstif laboratorik Ekpresi ASMA dan VEGF dengan pemeriksaan imunohistokimia ASMA dan VEGF terhadap jaringan mukosa pasien langit – langit inkomplit, unilateral dan bilateral serta dilakukan pemeriksaan foto klinis pada minggu pertama, ketiga dan keempat dimana pengambilan jaringan dilakukan unit Celah Bibir dan Langit-Langit RSAB Harapan.
Hasil: Dilakukan pengambilan jaringan pasien 4 pasien celah langit – langit non sindromik. Satu pasien celah langit – langit bilateral non sindromik, satu pasein celah langit – langit inkomplit non sindromik dan dua pasien celah langit – langit unilateral non sindromik. Hasil pemeriksaan imunohistokimia pada pasien celah langit – langit bilateral non sindromik lebih tinggi dibandingkan dengan pasien celah langit – langit unilateral dan inkomplit. Pada pemeriksaan foto klinis didapatkan kesembuhan luka pada keempat pasien tercapai dalam waktu empat minggu.
Kesimpulan: Terdapat perbedaan ekspresi gen ASMA dan VEGF di jarigan mukosa palatum pada kasus pasien celah langit – langit inkompilt, unilateral dan bilateral non sindromik yang berpengaruh terhadap kecepatan kesembuhan luka pasca operasi palatoplasti primer. Peningkatan ekspresi asma akan menyebabkan peningkatan luasan terjadi gagalan fusi antara prosessus palatinus.
.....Background: Cleft palate is one of the many congenital abnormalities that occur. Alpha-smooth muscle actin (ASMA) is the dominant actin of isoform in the smooth muscle cells and plays an important role in the process of fibrogenesis. Differentiation of fibroblasts into myofibroblasts is a key process in wound healing and tissue repair, but is harmful to tissue function when overuse such as hypertrophic scars. In wound healing Angiogenesis is essential for the supply of oxygen and nutrients to injured tissue cells and dividing tumor cells that have high metabolic requirements, angiogenesis stimulated by vascular endothelial growth

factor (VEGF). ASMA and VEGF activity factors that influence the formation of post-action scarring which may cause impairment of maxillary development.
Objectives: Can be known for ASMA and VEGF expression in incomplete, unilateral and non-syndromic bilateral cleft palate patients.
Methods: In this study a laboratory deksripstif study of ASMA and VEGF expression was performed with ASMA and VEGF immunohistochemistry examination of mucosal tissue of incomplete, unilateral and bilateral cleft palate patients as well as clinical photo examination in the first, third and fourth week where tissue taking was performed at Celah Bibir dan Langit-Langit RSAB Harapan kita.
Results: Conducted tissue retrieval patients 4 patients cleft palate non-syndrome. One patient had a non syndromic bilateral cleft palate, one patient non syndromic incomplete cleft palate and two non syndromic unilateral cleft palate patients. Immunohistochemical examination results in non-syndromic bilateral cleft palate higher than with unilateral and incomplete cleft palate patients. At the clinical photo examination, the wound healing in all four patients was achieved within four weeks.
Conclussion: There is a difference in ASMA and VEGF gene expression in the palatum mucosa in the case of incomplete, unilateral and bilateral non syndromic cleft patients affecting the rate of wound healing following primary palatoplasty surgery. Increased expression of asthma will cause an increase in the extent of fusion failure between the palatinus process.