

## Deteksi metilasi gen O6- Methylguanine DNA Methyltransferase (MGMT) pada penderita Orofacial Cleft = Detection of o6-Methylguanine (DNA) Methyltransferase (MGMT) gene ethylation in patients with orofacial cleft

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### Abstrak

Latar Belakang: Gen MGMT berperan dalam mekanisme perbaikan DNA melalui transfer alkil mencegah terjadinya mutasi gen ? gen terkait orofacial cleft. Metilasi pada promotor gen MGMT mempengaruhi regulasi ekspresi gen tersebut.

Tujuan: Mengetahui gambaran kejadian metilasi gen MGMT penderita orofacial cleft.

Metode: Dua puluh empat sampel orofacial cleft dan 24 sampel normal dilakukan deteksi status metilasi melalui methylation specific-PCR (MSP).

Hasil: Diperoleh 33.3% orofacial cleft berstatus fully methylated dan 66.7% partially methylated. Sedangkan pada kontrol, 100% berstatus partially methylated.

Kesimpulan: Terjadi metilasi gen MGMT pada penderita orofacial cleft dan distribusinya berbeda dengan individu normal ( $p=0.004$ ).

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Background: MGMT gene plays a role in DNA repair mechanisms via the transfer of alkyl to prevent mutation of gene related orofacial cleft. Methylation at MGMT gene promoter has effect in the regulation of gene expression.

Objective: To determine MGMT gene methylation status in orofacial cleft.

Methods: Methylation status were detected in 24 orofacial cleft and 24 healthy individuals samples by methylation-specific PCR (MSP).

Results: 33.3% orofacial cleft were fully methylated and 66.7% were partially methylated. Meanwhile, in control group, 100% were partially methylated.

Conclusion: MGMT gene methylation occurred in orofacial cleft and the distributions are different from healthy individuals ( $p=0.004$ ).