

A lack of evidence to support the use of Retin-A for the prevention of malignant transformation of oral leukoplakia when compared to traditional treatments

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Clinical problem and question



Image 1. Oral leukoplakia of the lateral border of the tongue.



Image 2. Malignant squamous cell carcinoma of the lateral border of the tongue.

Clinical Question

Among adult patients older than 18 years old with oral leukoplakia, to what extent does the therapeutic use of Retin-A (retinoid), in comparison to traditional treatments (including observation/monitoring), result in reduced incidence of malignant transformation over a period of 2 years?

Search strategy

A total of 25 articles were found using ("mouth neoplasms/prevention and control" [MeSH Terms] OR "mouth neoplasms" [tiab] OR "mouth mucosa/pathology" [MeSH Major Topic] OR "leukoplakia oral prevention and control" [All Fields] OR "leukoplakia" [tiab] OR "leukoplakia, oral/therapy" [MeSH Major Topic] OR "lichen planus, oral/drug therapy" [MeSH Major Topic] OR "oral lichen planus" [tiab] OR "head and neck neoplasms/prevention and control" [MeSH Terms]) AND ("retinoids" [MeSH Terms] OR "retinoids" [tiab])

Limits applied: Guideline, Meta-Analysis, RCT, or review. 10-year publication range. English language.

Additional search: ScienceDirect (1 article)

References

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Clinical bottom line

Limited and low-quality evidence suggests that the risk of oral cancer development in the retinoid treatment group may be lower compared to the control.

Moreover, lack of improvement of atypical histologic features of the oral leukoplakic lesion, such as hyperplasia and dysplasia, is less likely in the retinoid treatment group than in the placebo group.

Results

Evidence quality

- With retinoid treatment, participants with oral leukoplakia had 24% less risk of oral cancer development compared to the control group. These results are clinically meaningful, not clinically precise, and not statistically significant.
- We can infer that retinoid treatment leads to 15% less risk in development of atypical lesion features on histology. These results are statistically significant, clinically meaningful, yet not clinically decisive.

Strengths

- Sophisticated evidence searches (4 databases); no language restrictions; two independent reviewers; summary tables; Prisma diagram; Cochrane risk of bias tool; GRADE approach for evidence quality.

Limitations

- Limited number of studies to answer clinical question; outdated evidence (1986, 1997); small sample sizes; different primary outcomes; short follow up; low quality of evidence; unclear risk of bias for randomization and allocation concealment; risk of publication bias; no meta-analysis.

Applicability

- Retinoid treatments are widely available and feasible in Canada.
- However, only one study was performed in North America (USA), while the second one was performed in India.
- Thus, the results may not be entirely generalizable to the Canadian population today (different oral health care systems, SES, ethnic groups, differences related to nutrition, tobacco, and alcohol drinking habits, air pollution, patient compliance, specialists' experience as well as possibly because of the different standards and programs for the training of specialists)

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