

Introduction

Gingivitis is the inflammation of gingiva (gum), it commonly occurs due to bacterial plaque accumulation on the teeth in which the bacteria exert its effect on the surrounding gingival tissue by releasing certain harmful products such as (collagenase and proteases).

Gingivitis if non-diagnosed and treated may progress into periodontitis and teeth loss.^{1,2}

Similarly, during pregnancy some hormonal changes take place (progesterone and estrogen) that play a role in aggravation of gingivitis, and these hormones are elevated drastically throughout the pregnancy (1st, 2nd and 3rd trimesters).¹

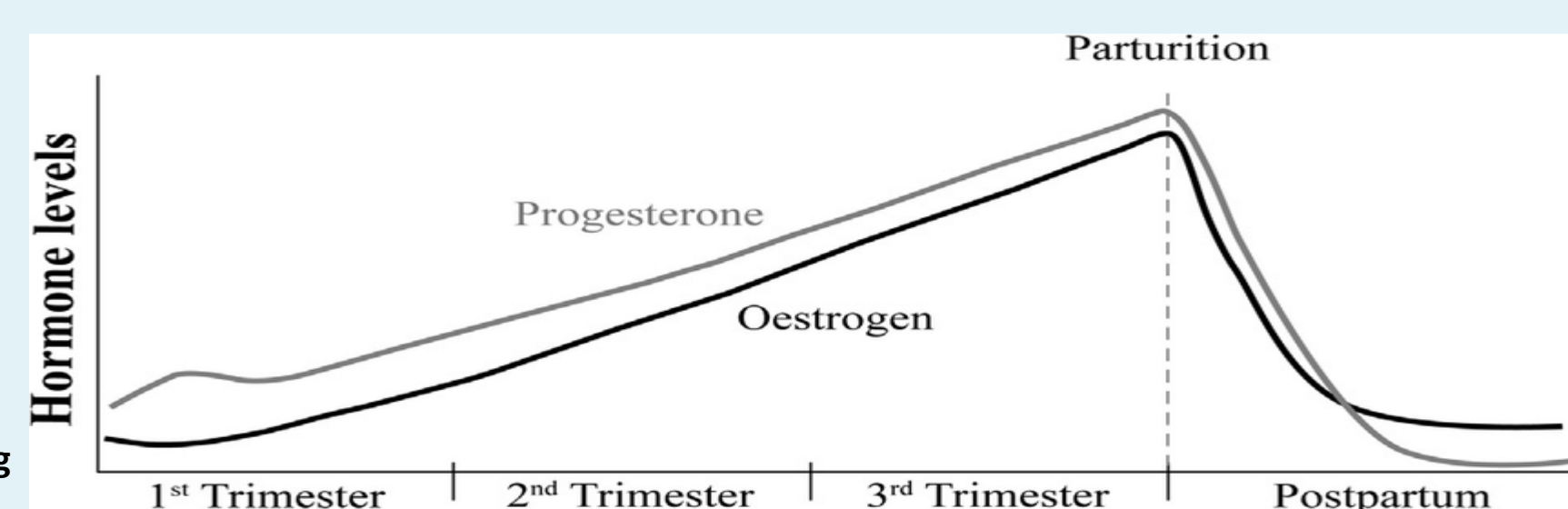


Fig (1) Hormonal level changes in female during pregnancy.



Fig (4) showing anterior view of inflamed gingiva in lower jaw.



Fig (5) showing posterior view of inflamed gingiva in lower jaw.

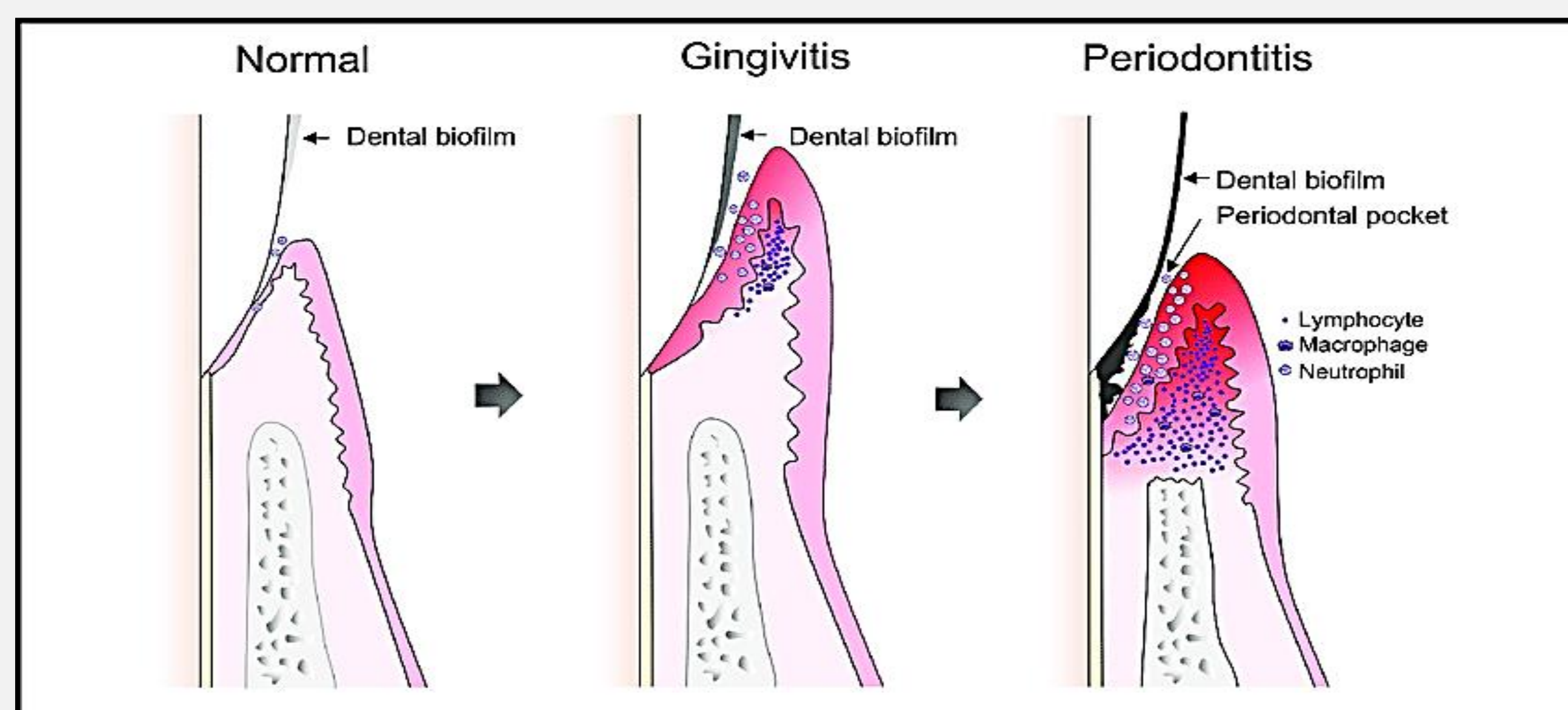


Fig (6) showing the possible consequence of gingivitis progression.

Healthy gingiva



Fig (2) showing anterior view of normal gum.

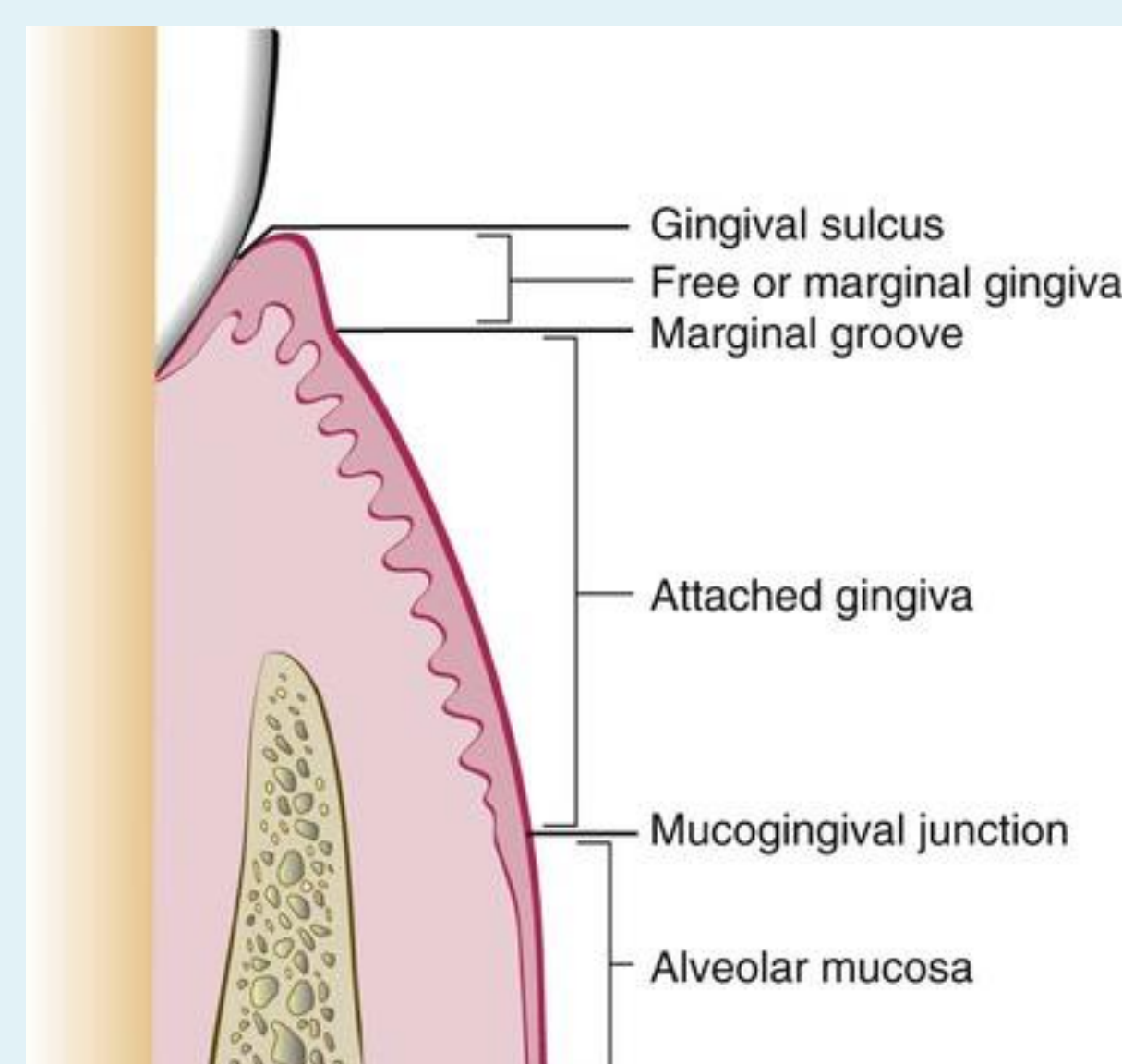
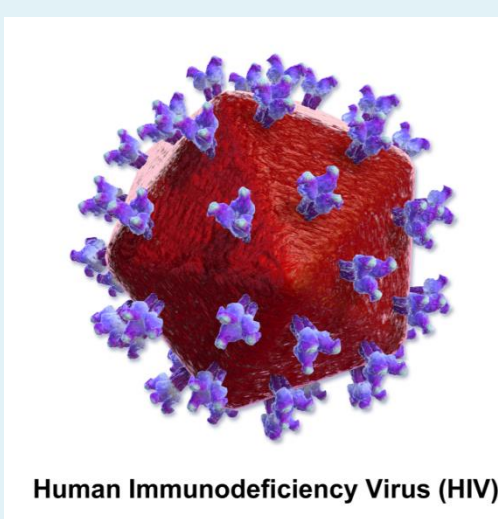


Fig (3) showing the parts of gingival tissue.

Causes of gingivitis

- Smoking or chewing tobacco.
- Diabetes mellitus.
- Genetic factors.
- Immunocompromised (e.g HIV & AIDS).
- Nutritional deficiencies (e.g vitamin C).
- Pregnancy.³

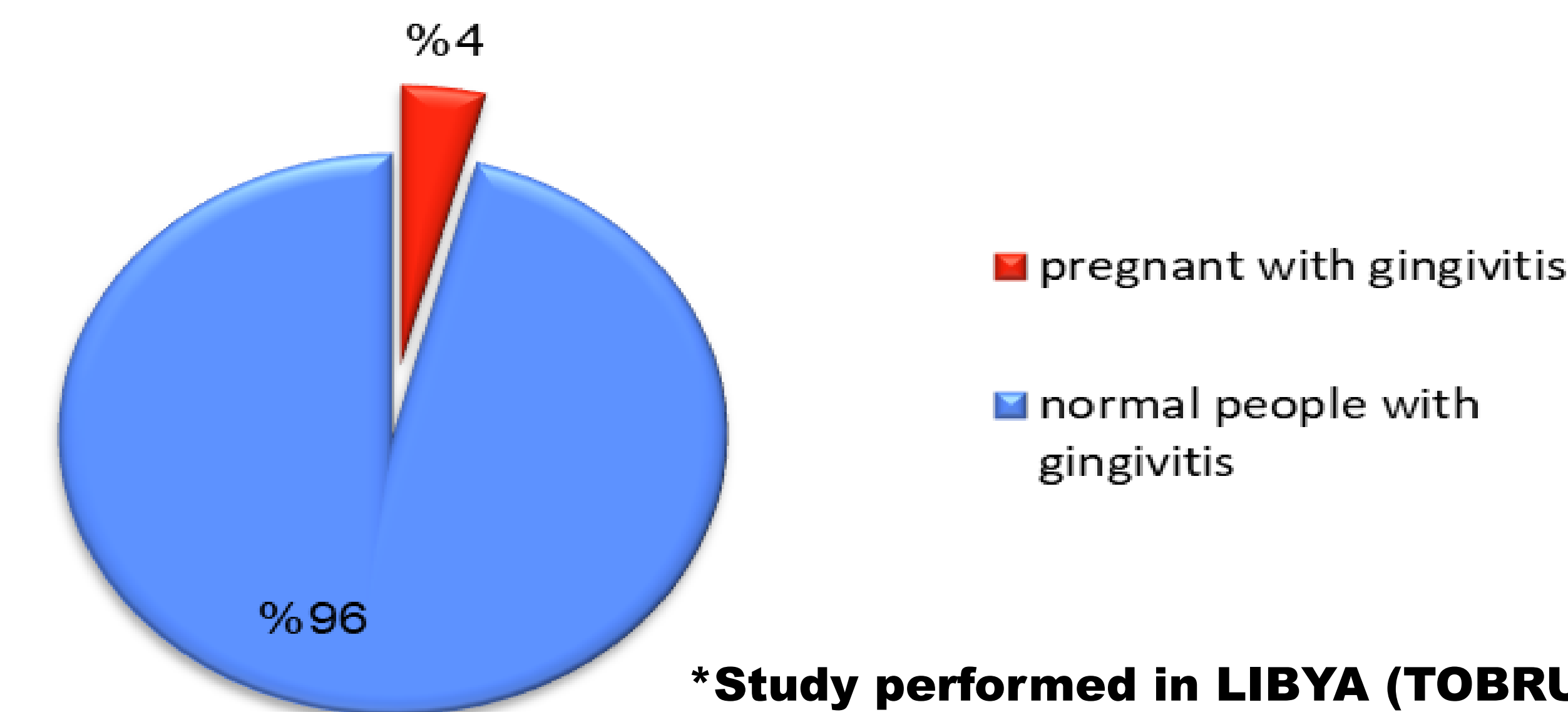


Human Immunodeficiency Virus (HIV)



Study (2)

comparison between normal people and pregnant women with gingivitis in Libya



Conclusion

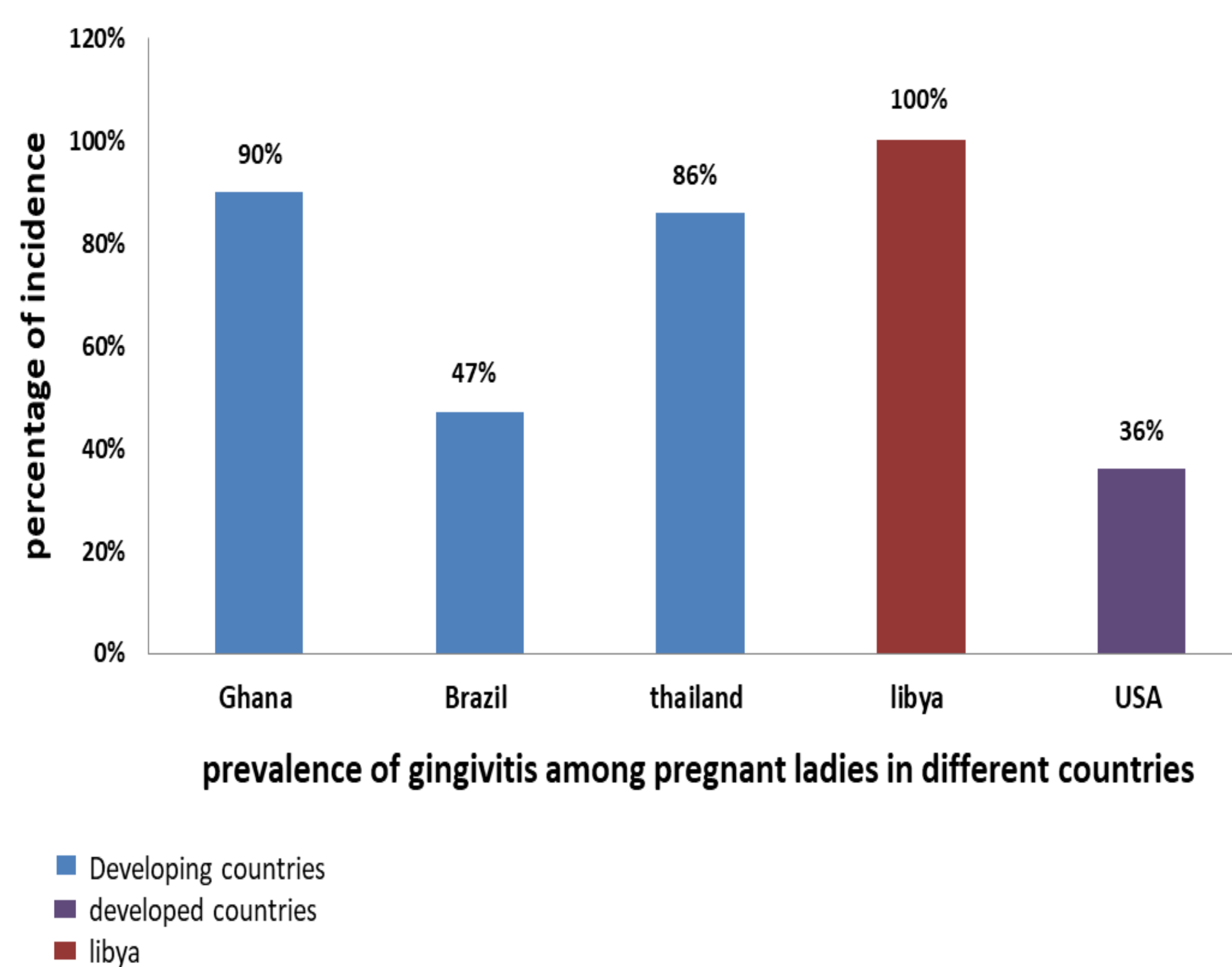
There are many causes can lead to gingivitis including the hormonal changes during gestational period which in turn increases the susceptibility to inflammatory reaction commonly caused by bacterial plaque, subsequently from the previous studies the rate of incidence of gingivitis during pregnancy is quite common in the developing countries (e.g LIBYA) than that of more developed countries (e.g USA).

We can reduce the risk of gingivitis associated with pregnancy by performing regular visits to dentists, also they should properly achieve good oral hygiene, like regular teeth brushing and flossing as well as mouth washing.

References

- (1) Carranza FA, Newman MG, Takei HH, Klokkevold PR. *Carranzas Clinical Periodontology*. St. Louis, MO: Saunders Elsevier; 2006.
- (2) Wu M, Chen S-W, Jiang S-Y. Relationship between Gingival Inflammation and Pregnancy. *Mediators of Inflammation*. 2015;2015:1-11. doi:10.1155/2015/623427.
- (3) Erchick DJ, Rai B, Agrawal NK, et al. Oral hygiene, prevalence of gingivitis, and associated risk factors among pregnant women in Sarlahi District, Nepal. *BMC Oral Health*. 2019;19(1). doi:10.1186/s12903-018-0681-5.

Study (1)



Graph (1) showing the prevalence of gingivitis during pregnancy in different countries to reflect the relation of educational and socioeconomic status with incidence of gingivitis.²