

# HPV genital infections and contraception

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*Summary:* Human Papilloma Virus genital infections are, especially during fertile age, a very common finding in performing PAP smear and colposcopy.

The interest in these infections arises from their frequent association with dysplasia and their possible role in the etiology of carcinoma of the lower genital tract.

The natural history of HPV infections is not very well known and foreseen.

Epidemiological studies indicate that the progression, regression or stability of induced HPV lesions are correlated with cofactors which are considered risk factors in carcinoma of the lower genital tract.

The aim of this study is to evaluate the influence of estroprogestinic contraception and other methods on the evolution of the HPV genital infections.

*Key words:* HPV infections; Contraception.

## INTRODUCTION

Genital HPV infection, viral affection caused by Papova Virus is often diagnosed in performing Pap Smears and Colposcopy<sup>(1, 2)</sup>. The frequency of this pathology, which is observed mainly in young women, has been increasing. It is a sexually transmitted disease, known from early times, which has been playing an evermore important role, nowadays, both from the epidemiological aspect and for the correlation with cancerogenesis of cervical cancer<sup>(3, 4, 5, 10)</sup>.

In order to diagnose its clinical and sub-clinical forms, an accurate colposcopic examination of the vulva, vagina and cervix is necessary.

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The evolution of these affections is unpredictable: some of them regress, some persist, whereas others develop into "in situ" cancer. Up to now the factors that influence this evolution are still unknown<sup>(6, 7)</sup>.

Our study evaluates some factors that may influence the evolution of these genital HPV infections in relation to the use of contraceptives.

## MATERIALS AND METHODS

An HPV infection in the lower genital tract, was diagnosed in 108 women, who had been previously examined at the gynecological surgeries of Padua University.

Each one of them was subjected to integrated examinations, vulvo-colposcopy, PAP-smear and histological examination. The age of the patients varied between 18 and 51 years.

They were divided in two groups:

- 41 women using oral contraception with estroprogestinics (mean age 29.5);
- 67 women using other methods (IUD, condom) or did not use any method at all (mean age 30.1).

Each patient was examined again after 6-8 months.

In order to compare the two groups, we considered the evolution of the lesions detected and other eventual factors which were likely to have influenced it.

The parameters in both groups were age of the patient, age at first sexual intercourse, the number of pregnancies, the number of partners since they began their sexual activities and smoking habits.

## RESULTS AND DISCUSSION

In the two groups we have not indicated statistically significant differences regarding age, but a slight prevalence of younger women using oral contraceptives.

No particular elements regarding the study of sexual activity have been indicated: the number of partners they had since the beginning of sexual activity was difficult to evaluate and mostly unreliable. Regarding the age of first sexual intercourse there were no statistically significant differences: the mean age of the first group using oral contraceptives was 21.6, whereas in the second group, it was 20.4.

As regards the number of pregnancies, women who used oral contraceptives had less children. We also evaluated the smoking habits in both groups: in the first group 12 woman out of 41 smoked, in the second group, 20 out 65.

Considering these factors we evaluated the progression of the lesions after 6-8 months, in both groups in terms of regression, persistence or worsening.

Table 1. - *Characteristics of the two groups examined.*

	Oral contraceptives (n. 41)	Other methods (n. 65)
Age	29.5	30.1
Pregnancies	0.7 children	1.29 children
Age first intercourse	21.6	20.4
No. partners	unreliable	-
Smoking habits	12 out of 41	20 out of 65

Table 2. - *Evolution of the lesions in relation to contraceptives.*

	Regression	Persistence	Worsening
Estraprogestinic contraception n = 41	10 (24.3%)	24 (58.5%)	7 (17%)
Other methods of contraception n = 65	21 (32.3%)	35 (53.8%)	11 (16.9%)

Table 3. - *Evaluation of the lesion according to the use of tobacco in relation to the contraceptive.*

	Regression	Persistence	Worsening
Tobacco + E/P n = 12	0	10 (83.3%)	2 (17.7%)
Tobacco + other methods n = 19	3 (15.9%)	12 (63.1%)	4 (21.0%)

As can be seen in Tab. 2, in the first group a spontaneous regression of the pathology was observed in 10 patients, a persistence in 24, whereas in 7 the colposcopic picture worsened. In the second group the lesions had spontaneously disappeared in 21 patients when examined for the second time, whereas in 35 patients it persisted and in 2 worsened.

As there is an absence of significant differences in the factors considered, as results in Tab. 1, we thought it unnecessary to evaluate the evolution of every factor, but for smoking, since some studies point out an increased risk for smokers<sup>(8)</sup>. Therefore the tobacco-pill association could have a worsening effect on the evolution of the HPV lesions.

We did not observe in our study any case of regression, whereas in 83% of the cases the lesions were persistent. In the second group 15.9% had regression, 63.1% persisted, 21% got worse.

## CONCLUSIONS

It is difficult to reach conclusions from this study and from reference data.

Concerning smoking habits only further studies on greater numbers will be able to confirm what is, at present, only a suspicion. Namely association with the estroprogestins and smoking habits might be considered an additional risk factor for the evolution of HPV genital infections and of cervical cancer.

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