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## Hidradenitis Suppurativa An association with the use of oral contraceptives

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### **ABSTRACT**

Seven patients are described in whom the onset of **hidradenitis suppurativa (HS)** was closely associated with the use of certain combined oestrogen-progestogen contraceptive pills. Complete resolution of **HS** occurred in two patients who agreed to discontinue the combined pill, and in three patients on a higher oestrogen-progestogen preparation. It is suggested that some combined pills may precipitate **HS** because of their androgenic properties as androgens appear to be implicated in the development of the disorder. A more oestrogenic contraceptive is recommended if a combined pill is indicated in patients predisposed to **HS**.

## **Introduction**

Hidradenitis suppurativa is a disorder affecting the apocrine sweat glands of the axillae, ano-genital regions and breast resulting in recurrent boils at these sites <sup>(1)</sup>. We report seven cases which occurred in patients taking the combined oestrogen-progestogen pill.

## **Patients**

Seven females, who have attended one of three family planning clinics or General Practitioner's surgery during the period February 1987 to December 1987, were identified in whom Hidradenitis suppurativa (**HS**) had developed whilst taking the oral contraceptive pill. Pill use in these patients and its temporal relationship with the development and exacerbation of HS is shown in **Table 1**. One case history (AF) is described in detail to illustrate the salient features of this association.

## **Case History**

AF. Aged 23 years, was prescribed Conova-30 (ethinylloestradiol 30ug – ethynodiol 2mg) in 1981 and one month later developed **HS** of the ano-genital region and was treated with antibiotics. A further three episodes of **HS** occurred up until October 1982, when Conova-30 was changed to Eugynon-30 (ethinylloestradiol 30 ug – levonorgestrel 250 ug) because of mid-cycle bleeding. Between October 1982 and June 1987 another eight episodes of severe **HS** occurred which required antibiotics despite a change of pill to microgynon-30 in June 1986. In June 1987 microgynon-30 was changed to logynon with no recurrence of her symptoms up to the present time.

## **Discussion**

In the majority of cases reported, a strong temporal relationship was apparent between initiation of therapy with certain combined oral contraceptives (see **Table 1**) and the onset of **HS**. Complete resolution of **HS** occurred in two patients with recurrent disease in whom oral contraceptives were discontinued. A further three patients benefited by a change to a combined pill containing a higher oestrogen:progestogen ratio. One patient relapsed within one month of changing to marvelon, a pill previously recommended for these patients and believed to contain progestogen, desogestrel, with little or no androgenic properties <sup>(2)</sup>. However, this may have been a continued metabolic consequence of previous microgynon-30 therapy. The other patient who remained on a progestogen only pill

continued to have relapses of **HS**. Although acne has been reported in patients on oral contraceptives <sup>(3)</sup> there has been no reported association with **HS** <sup>(4)</sup>. Furthermore, since 1955 the **CSSM** has received only one case of abscess formation and a further case of pustular rash associated with the use of oral contraceptives. As in acne vulgaris, androgens appear to be a pre-requisite for the development of **HS**, and raised testosterone levels have been found recently in females with the latter condition. Oestrogens alternatively benefit patients with acne and possibly **HS**, by increasing circulating sex hormone binding globulin (**SHBG**) levels. Androgens are bound more avidly than oestrogen to this protein and are therefore made less freely available to the tissues. It is possible that the progestogen in these contraceptives, all 19-nortestosterone derivatives, precipitate **HS** because of their androgenic properties although it appears that this can be overcome by preparations containing a higher oestrogen:progestogen ratio such as found in the sequential pill (logynon). The degree of androgenicity of the progestogens may also differ, levonorgestrel and ethynodiol being more androgenic than merethisterone and the newer preparations, such as desogestrel and gestodene alleged to have minimal or no androgenic properties. This would explain the lack of correlation of **HS** with many other combined contraceptives and the benefit shown in three of our patients, to a sequential combined pill with a higher oestrogen:progestogen ratio. We suggest that treatment in these cases should be either an alternative form of contraception or if an oral contraceptive is indicated, one that has more oestrogenic properties.

## **References**

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**Table 1**  
**Clinical details of pill use and relationship with Hidradenitis Suppurativa**

Patient	Age (years)	Pill use prior to and without development of HS	Pill use at onset and during exacerbations of hs	Duration from pill use to development of HS (months)	Area involved	Treatment of HS	Pill use following development but without recurrence of HS
DD	26	-	Micrgynon-30 <sup>(1)</sup>	2	Axillae Anogenital	Surgery X 2 Antibiotics	-
JL	27	Brevinor <sup>(2)</sup>	Ovranette <sup>(1)</sup>	8	Right Groin	Surgery X 1 Antibiotics	-
SS	39	Ovulen-50 <sup>(3)</sup>	Microgynon-30 Micronor <sup>(4)</sup>	2	Axillae Anogenital	Antibiotics	-
LG	18	-	Microgynon-30	1	Right Breast Right Groin	Antibiotics	Logynon <sup>(5)</sup>
BC	21	-	Ovranette	24	Axillae	Antibiotics	Logynon
SP	17	-	Microgynon-30	2	Axillae Anogenital	Antibiotics	Marvelon <sup>(6)</sup>
AF	23	-	Gonova-30 <sup>(7)</sup> Eugynon-30 <sup>(8)</sup> Microgynon	1	Anogenital	Antibiotics	Logynon

(1) Ethinyloestradiol 30ug – Levonorgestrel 150ug  
(2) Ethinyloestradiol 35ug – Norethisterone 500ug  
(3) Ethinyloestradiol 50ug – Ethynodiol 1mg  
(4) Norethisterone 350ug  
(5) Ethinyloestradiol 30/40ug – Levonorgestrel 50/75/125ug  
(6) Ethinyloestradiol 30ug – Desogestrel 150ug  
(7) Ethinyloestradiol 30ug – Ethynodiol 2mg  
(8) Ethinyloestradiol 30ug – Levonorgestrel 250ug