(a) Drainage of the lesser sac.

In the writer's opinion drainage of the lesser sac should be provided in all cases of pancreatitis for which laparotomy is performed. In hyposthenic patients drainage is most readily achieved through the lesser omentum: in hypersthenic types the most direct channel is below the stomach through the greater omentum, either above or below the transverse colon according to the anatomical conditions present. Additional dependent drainage may be provided by a stab incision in the left loin, but unless this can be performed without turning the patient it should not be done at all in one who is extremely ill, and who will not tolerate prolonged operative interference.

As well as supplying drainage of the lesser sac, it must be ensured that the pancreas itself is relieved of tension. If the peritoneum covering the pancreas is intact, incisions should be made into it to allow the swollen pancreas to expand; if there is gross haemorrhage, sloughing or suppuration the incisions should be carried into the substance of the gland, parallel to its long axis in order to avoid damage to the ducts.

(b) Drainage of the biliary tract.

In the majority of cases of acute pancreatitis chronic disease of the biliary tract is present. The gall bladder is examined, and if cholecystitis or calculi are found cholecystostomy should be performed. The common bile duct should also be palpated. If a stone is present it should be removed and the duct drained; in the rare cases of impaction at the ampulla of Vater it may prove impossible to dislodge the stone, and the patient is not fit enough to withstand prolonged procedures like transduodenal choledochostomy. Simple drainage of the duct should be performed in such an emergency, leaving removal of the calculus for a later operation. If the common bile duct is dilated without a calculus being palpable, aspiration should be carried out with a hypodermic needle and choledochostomy performed if there is evidence of infection.

Cholecystectomy should never be performed in the presence of acute pancreatitis. The patient is too ill for anything but minimal operative interference, and it is possible that the gall bladder may be needed later for the operation of cholecystgastrostomy should the fibrosis of healing in the pancreas lead to constriction of the common bile duct and the development of obstructive jaundice.

OIL ACNE

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Occupational skin disorders are an important cause of morbidity in industry and oil dermatitis is very common at the present time (MacKenzie 1943). The disorders resulting from the use of cutting oils have received considerable attention (Bridge 1918, Schwartz and Peck 1943, Whitwell 1943), whereas the equally common troubles of those using oil in the repair of mechanical vehicles have received little notice.

Action of Oil on the Skin.

Oil produces dermatogosis (Prosser White 1928) of two kinds—oil acne and oil dermatitis. The former is a true folliculitis with comedo formation; the latter is an eczematoid reaction. Schwartz (1941) states:—"All oils may plug up pores of the skin and form comedones." Thus, like Bridge (1918), he believes the acne is primarily mechanical in origin. On the other hand

Whitwell (1943) believes that chemical irritation of the follicles is more important than mechanical blockage. Schwartz (1941) points out that "all petroleum oils have the property of defatting the skin" and that greasy skins are less apt to be defatted. This is probably the reason for some people having folliculitis and some dermatitis, the seborrheic types being more prone to the former and those with dry skin to the latter. Nakauchi (1941) suggests that the different kinds of skin reaction depend on the size of the oil particle—a droplet of smaller diameter than the follicle causing acne and a larger droplet causing eczema. It is most unlikely that his theory is correct. Bridge (1918) regards the dermatitis as due to injury to the skin by minute particles in the oil but it is improbable that this is the principal cause. An acneiform reaction is much commoner on hairy skin (Schwartz 1941, Whitwell 1943) and the latter author finds it commoner in dark-skinned people as is acne vulgaris (Killer 1932, Sallenbach-Keller 1932, Mumford 1933).

Acne Producers.

Schwartz and Tulipan (1939) put petroleum oils first on their list of acne producers. They hold this place because of the frequency of their use. The most potent acne producers are certain chlorinated hydrocarbons. A great deal has been written about their action on the skin. (Thibierge and Pagniez 1900, Schwartz and Peck 1943); the most important are the chloronaphthalenes (Mayers and Silverberg 1938, Jones 1941) and the chlorodiphenyls (Jones and Alden 1936). Workers exposed to chlorine gas do not suffer from folliculitis which occurs only in workers with certain chlorinated organic compounds. Waxes and tars are also acne producers.

Occupational Aetiology.

Purdon made a brief reference to acne among flax workers in Belfast in 1867 and gave a more detailed description of acne of the upper limbs of "doffers" in the flax mills in 1875; this was an oil acne. Ogston described acne of the forearms of workers in crude paraffin in 1871 and this condition was also described by James (1896).

Schwartz and Peck (1943) state that the commonest cause of occupational acne is from insoluble cutting oils; they mention that chlorine compounds are sometimes added to these oils. Whitwell finds that acne is much more likely to occur if paraffin be added to the oil and Thomsen (1918) notes that the addition of paraffin oil has led to several fires. Schwartz (1941) gives an excellent account of the subject.

A full description of the occupational hazards of petroleum and its derivatives is given by Carozzi (1933).

The folliculitis occurring among drivers and repairers of mechanical vehicles has received surprisingly little attention despite its great frequency. It occurs especially when oil-soaked clothing is worn for long periods (Henry and Horner 1939) as among lorry drivers (Jacobson 1934). Diesel oil is scarcely mentioned in the literature of the subject although I have seen much acne caused by it.

Symptomatology

Any or all of the lesions of acne may be found. Comedones are invariably present, papules are usually found and pustules may be absent or profuse. In workers with cutting oils the forearms are most frequently affected especially on the extensor aspects. Large pustules and even boils occur. The thighs are often involved. There is always a latent period before the lesions appear.

The lesions among those who work with vehicles are much more variable. Spending long periods in grease soaked demins gives lesions usually most noticeable on the thighs. Those engaged in greasing sometimes have lesions on the upper limbs. Wiping greasy hands on the face causes acne to appear there; it sometimes consists of enormous numbers of very small rather hard comedones which are found most profusely around the eyes and on the cheek-bones, sometimes with a few larger blackheads scattered among them. This picture is very like that described by Jones (1941) as occurring with chloronaphthalenes. Whittle (1944) has described a man, aged 20, with acne of the penis from wearing oily trousers.

Case 1.—A private soldier, aged 22, had a few blackheads on his face, chest and back for seven years. For one year he had mild acne vulgaris on his neck. From eight months till two months before being seen he had been working with Diesel oil which used to splash on his trousers on which he used to rub his hands. For six months he had had a rash on his thighs.

On the outer surface of the upper part of each thigh was a sharply demarcated area about the size of his hand. It contained a very large number of comedos, papules, and pustules.

Case 2.—A leading aircraftman, aged 20, had an intermittent rash in the groins and on the upper thighs for one year. He was a driver and his overalls sometimes became oily with motor grease.

On his groins and upper thighs were a considerable number of comedos, papules, and pustules.

Case 3.—A lance-bombardier, aged 20, had a mild acne of the face for 5 years. He had been doing much oily work of recent months and was in the habit of rubbing his eyes with his greasy hands.

On his face were more than five hundred comedos, most of them very small, and most thickly distributed just below and to the outer edge of his eyes. There were very few papules or pustules.

Sulzberger, Rostenberg, and Sher (1934) found that patch tests with the grease in cases of oil acne were negative.

Histology.

Schwartz and Peck (1943) have studied the histology of biopsy specimens of occupational acne. In the form produced by cutting oils the picture resembles that of acne vulgaris except that there is much more inflammatory reaction especially around the hair follicles. In chloracne the appearance is more cystic. Lesions resulting from exposure to coal tar are characterised by a marked melanosis in addition to the features of acne.

Non-Occupational Oil Acne

A number of cases have been described of comedos with and without pustules in infants from oil (usually camphorated oil) being rubbed into them (Dore 1909, MacLeod 1918, and Savill 1920). Little (1920) has described a man, aged 45, who developed acne of the chest after rubbing in camphorated oil. Pernet (1916) described a boy, aged 8, who had comedos on the forehead without other lesions, caused by using brilliantine and by wearing a school cap which had become greasy with the brilliantine.

Prevention

The incidence of oil acne may be greatly reduced though probably not entirely abolished. In especially exposed occupations some selection of workers is desirable. Those who are obviously of seborrheic type or who give a history of recurring skin disorders should not be given this type of employment. Whitwell (1943) states that the condition is commoner among men than women; this may be due to their greater hairyness.

The most important single factor in prevention is the cleanliness of the worker. Washing facilities should be good and should be used; soap and hot water are essential. Wearing of greasy clothes for long periods should be made unnecessary and should be discouraged. Oily denims should be changed frequently.

Cleanliness of the oil is of some importance. On the other hand, the addition of disinfectants or antiseptics to the oil is to be condemned. They are apt to irritate the skin and cause dermatitis, and are unnecessary because machine oil is usually found to be sterile on culture. Machines should be kept clean and should be shielded to prevent oil splashing from them.

Barrier substances are often but not always of use. It is important that they should be of a type suitable to the work involved—they must be completely non-irritant, insoluble in oil, and easy to use. If they be difficult to apply or if they interfere with the comfortable use of the hands they will be avoided by those whom they are meant to protect. Bridge (1918) advised dusting the skin "with a powder containing equal parts of starch and zinc oxide before commencing work." It is important that barrier substances are not regarded as a substitute for cleanliness.

Treatment

In theory, all those with oil acne should stop working with oil immediately. In practice, this applies to factory workers affected by cutting oils. On the other hand lorry drivers and

those engaged in similar work can continue in their occupation provided it is seen that they stop spending most of their working time in greasy clothes.

In mild cases frequent washing with soap and hot water will alone be enough to achieve a cure. When there is much evidence of inflammation soap and water must be avoided for the first few days. Cases 1 and 2 (described above) were cleared with the use twice daily of sulphur 10% in calamine lotion; in fair-skinned people this should be reduced to 5%, and in those with red hair to 2%. In chronic cases with huge numbers of minute comedos and no pustules nor signs of inflammation the skin may be peeled with the following paste:—

Resorcin	3-4 %
Precipitated Sulphur ..	3-4 %
Zinc Oxide	25 %
Powdered Starch ..	15-20 %
in Soft Paraffin.	

This is rubbed into the skin every night and washed off in the morning. When the skin shows signs of being inflamed and beginning to peel any soothing preparation is applied. If necessary, this may be repeated two or three times.

In acute cases with much inflammation around the lesions calamine lotion (to which zinc sulphate 0.5 % may be added) should be used.

Elyan (1943) recommends treating oil acne and dermatitis with an ointment containing a large proportion of unsaturated fatty acids.

Occasionally resistant cases have to be treated with X-rays. These should be given only by someone accustomed to their use.

Prognosis

Whereas mild cases clear up easily and quickly Sulzberger, Rostenberg and Sher (1934) found that the eruption sometime persisted long after all contact with oil ceased despite all treatment. Forman (1944) refers to one man who was in hospital for three months for treatment of oil acne of his thighs, abdomen and genitals.

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