maande betekenisvol gedaal. Hierdie daling is herstel deur die toedien van 25 mg. askorbiensuur aan elke lid per dag. Analise van die kos toon dat elke lid daaruit gemiddeld 71 mg. askorbiensuur per dag kon kry.

Om normale hemoglobienwaardes en rooi bloedsettelings te kon handhaaf, was 96 mg. askorbiensuur in die wintermaande en 171 mg. in die somermaande per lid per dag nodig. Hierdie syfers is heelwat hoër as dié wat vir gematigde streke aanvaar word.

Op grond van bykomstige fisiese inspanning, as gevolg van subzero-temperature, die gewig van die klere, die onregelmatigheid van die sneeu-oppervlakte, en isolasie, word die daagliike askorbiensuurbehoeftes in Antarktika op 2,0-3,3 mg. per kg. liggaamsgewig, of 150-250 mg. per persoon per dag, gestel.

Aangesien Antarktiese temperature nie konstant laag genoeg is om askorbiensuur in kos vir 'n onbeperkte tyd te bewaar nie, word dit aanbeveel om nie op die kos as enigste bron van askorbiensuur te reken nie, maar om by voorkeur die hele daagliike behoefte van die aanvang van 'n ekspedisie af in die vorm van droë sintetiese askorbiensuur te voorsien.

SUMMARY

Haemoglobin values and red-blood-cell counts of members of the first South African Antarctic Expedition to Queen Maud Land in 1960 showed a significant decrease within the first 5 months. This tendency was reversed by the daily administration of 25 mg. of ascorbic acid to every member.

Analysis of samples of the food indicated that from this source a member could receive 71 mg. ascorbic acid per day.

For the maintenance of normal haemoglobin values and red-blood-cell counts, it was found that in the winter months 96 mg., and in the summer months 171 mg. of ascorbic acid were necessary. These amounts are appreciably higher than the generally accepted recommendations.

Owing to stress, as a result of sub-zero temperatures, the weight of the clothes, the unevenness of the snow surface, and the isolation, the daily requirement of ascorbic acid for an adult in the Antarctic should be assessed at 2,0-3,3 mg. per kg. body weight, or 150-250 mg. per day.

The Antarctic temperatures are not consistently low enough for the preservation of ascorbic acid in food, and for this reason it is recommended not to rely on food as the only source of ascorbic acid, but to supply the total daily requirement of ascorbic acid in the dry synthetic form.


VERWYSINGS


AN EXPERIMENTAL STUDY OF CHEMICAL BURNS

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Very little experimental work has been carried out on chemical burns, in contrast to thermal burns. Apart from experimental procedures, there are usually scant and controversial suggestions on treatment of chemical burns in most relevant text-books. The opportunity to study acid and alkali burns, therefore, was eagerly accepted when the Department of Surgery was approached by the medical officers of the Cape Division of African Explosives and Chemical Industries to carry out such investigations.

MATERIAL AND PROCEDURE

Four young pigs, each weighing approximately 50 lb., were put at our disposal. It is well known that human and pig skin are anatomically similar and, although pig skin does not blister when burnt, it can be accepted that the macroscopic and microscopic changes would closely resemble those of human skin under similar conditions.

The following is a list of acids and alkalis which are used at the explosives factory, those most commonly used being italicized. For convenience, we numbered them thus:

### No. Acids
1. Oleum (fuming sulphuric acid) — 26.5% free SO₃
2. Concentrated nitric acid — 97% HNO₃, 0.3% HNO₃
3. Weak nitric acid — 47.5% HNO₃, 0.3% HNO₃
4. Manohydrate — 99% HSO₃
5. Fertilizer acid — 78.5% HSO₃
6. Nitroglycerine mixed acid — 39% HNO₃, 0.3% HNO₃, 60% H₂SO₃, 0.7% H₂O
7. Collodion cotton mixed acid — 24% HNO₃, 0.3% HNO₃, 61% H₂SO₃, 14.7% H₂O
8. Nitroglycerine spent acid — 80% HNO₃, 0.5% HNO₃, 78% H₂SO₃, 13.5% H₂O
9. C.P. hydrochloric acid — 32% HCl

### Alkalis
10. 50% Caustic solution
11. 3% Caustic solution
12. 10% Alcoholic potassium hydroxide
13. 25% Liquor ammonia, HNO₃
14. Quicklime

As 'treatment' for acid burns, the following were used in turn: running water, dry rag, a rag previously impreg-
nated with sodium-bicarbonate powder, and these neutralizers:
1. Buffered phosphate solution, made up to the following formula: Potassium dihydrogen phosphate (KH₂PO₄), 27.22 G.; dibasic sodium phosphate (Na₂HPO₄ · 2H₂O), 71.63 G.; distilled water, 1 litre; and brilliant green, 0.01 G.
2. Triethanolamine.
3. 96% Alcohol plus 1% ammonia.
4. Sodium-bicarbonate powder.
For alkali burns, the following were used: running water, dry rag, and these neutralizers:
1. Buffered phosphate solution.
2. Weak solution of acetic acid.
3. 96% Alcohol plus 1% acetic acid.

**Application of Chemicals to the Pigs**

A square $1\frac{4}{\text{in}}$ × $1\frac{4}{\text{in}}$ was cut into a strip of $\frac{1}{\text{in}}$-inch-thick perspex, to ensure that the burns were of equal size. The quantity of chemical applied was accurately measured with a pipette and rapidly sprayed into the square from a distance of approximately 6 inches. The undersurface of the perspex was coated with a thick layer of ‘vaseline’ to prevent the adjacent area of skin from being burnt as well.

The pig’s back was shaved and the animal was held by two assistants, a third applying the perspex square to the area of skin to be burnt. Each assistant was adequately protected against accidental burning. For the procedure no anaesthetic was given, and there was no evidence of pain to the pig unless ‘treatment’ was too long delayed. The burns were dressed with ‘jelonet’ and no local or parenteral antibiotics were used. The pigs were separately housed, since it was found that they tended to interfere with one another’s dressings. Each pig was given a card on which the experimental procedure and progress was recorded.

For biopsies, skin grafts, and many of the photographs, the pigs were anaesthetized with intravenous ‘sagatal’, injected into an ear vein.

**Symbols Used for Correlating Results**

In correlating macroscopic results, the following system was used:

- = no change, or healed;
$\pm$ = superficial burn or nearly healed; and $+$ to $+++++$ = degree of burn.

This system was further correlated histologically, thus:

$\pm$ = superficial burn (S), i.e. epidermal basal epithelium intact;
$+$ = partial-thickness burn (P), i.e. some dermal epithelial elements still viable; and $++$ to $+++++$ = full-thickness burn (F), to a varying degree, i.e. all epithelial dermal elements involved, although the sweat glands often looked normal.

**Comparisons of Neutralizers and Water (Acid no. 6 Used)**

This experiment was done to compare the effectiveness of the various neutralizers with that of water. The area of burn and the time interval (15 seconds) before treatment was commenced was the same for the water and each neutralizer used. The burns were inspected and biopsies taken on the 3rd day, with further recordings on the 10th and 17th days.

The results were:

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Macroscopic findings after</th>
<th>Histology on 3rd day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 days</td>
<td>10 days</td>
</tr>
<tr>
<td>Impregnated rag</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Sodium bicarbonate</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Buffered phosphate solution</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Alcohol + ammonia</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Water</td>
<td>$+$</td>
<td>$+$</td>
</tr>
</tbody>
</table>

**Experiment 3**

Oleum was used in this experiment to assess the merits of dry treatment compared with wet treatment. Many factory workers believe that oleum gives a more severe burn when in contact with water, postulating that a thermal burn is superadded to the chemical burn. It has been said that the added water, as well as the water in the tissues, becomes hot. Oleum was added to various quantities of water in a test-tube, but no significant temperature rise was found.

The results of this experiment were:

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Macroscopic findings after</th>
<th>Histology on 3rd day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impregnated rag</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Wet cottonwood dressing</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Triethanolamine rinsing</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Water rinsing</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Triethanolamine compress dressing</td>
<td>$+$</td>
<td>$+$</td>
</tr>
</tbody>
</table>

The time interval before treatment was begun was 15 - 20 seconds.

**Experiment 4**

It was soon apparent that the time interval before treatment is commenced is most important. In previous
experiments, where there was a constant time interval of 15 seconds or more, significant burns were found. In this experiment the time interval before treatment was varied, as was the type of treatment. Acid no. 6 was used, and timing was done with a stopwatch.

The results were:

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Delay (secs.)</th>
<th>Macroscopic findings after 3 days</th>
<th>Macroscopic findings after 10 days</th>
<th>Macroscopic findings after 16 days</th>
<th>Macroscopic findings after 8th day</th>
<th>Macroscopic findings after 14th day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wipe with dry rag</td>
<td>0</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>S</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>P</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>++</td>
<td>++</td>
<td>++</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>Healed</td>
<td>S to P</td>
</tr>
<tr>
<td>Running water</td>
<td>0</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>++</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>+++</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Buffered phosphate</td>
<td>0</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>solution</td>
<td>15</td>
<td>++</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wipe and water</td>
<td>0</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>++</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
| Wait 5 seconds, wipe
|                | 5-15          | +                                | +                                 | +                                 | -                               | -                                 |

Experiment 5 (Fig. 3)

In this experiment the value of grafting the delayed burn with skin was assessed. The pig was burned as usual and the areas were photographed after 3 hours. Alternate burn areas were excised and a partial-thickness skin-graft, taken from another area on the animal's back, was immediately applied. Acid no. 6 was used, with the following results:

Areas 2, 4 and 6 were grafted. On the 8th day, area 1 showed a significant full-thickness burn, whereas area 2 had good skin cover. In areas 3-6, where there was no delay, the ungrafted area had healed on the 8th day, and the grafted area had good skin cover, but was obviously unnecessarily grafted. Area 1 took almost 4 weeks to heal, with a poor cosmetic result compared with area 2.

Experiment 6

Experiment 5 was repeated, using acids nos. 1 and 2, both of which are stronger than no. 6. The results were:
Macroscopic findings on

<table>
<thead>
<tr>
<th>Acid no.</th>
<th>Area</th>
<th>Treatment</th>
<th>Delay (secs.)</th>
<th>8th day</th>
<th>14th day</th>
<th>28th day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Wipe + buffered phosphate</td>
<td>30</td>
<td>+++</td>
<td>++</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>Wipe + buffered phosphate + graft</td>
<td>30</td>
<td>Graft taken</td>
<td>++</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>Wipe + buffered phosphate</td>
<td>30</td>
<td>+++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>Wipe + buffered phosphate + graft</td>
<td>30</td>
<td>Graft taken</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Fig. 3. Comparison of grafted and ungrafted chemical burns (experiment 5). A. Inspection of ungrafted area on 8th day, showing delayed healing. B. Inspection of grafted area on 8th day, showing a good 'take'.

Experiment 7 — Alkali Burns

Alkalis nos. 10 and 13 were used in experiments similar to those with acids described above. Each was applied and, after a 15-second delay, treatment was either: wipe with a dry rag, wash with running water, or wash with running buffered phosphate solution. On the 3rd day the areas were inspected and all were found to be healed. It is obvious that the alkalis used in this experiment do not cause significant skin burns.

Correlation of Histological Findings

The histological findings correlated fairly closely with the macroscopic grading, with some variations. Biopsies were taken by knife on the 3rd day, since it was felt that the full effect of the burn should be obvious by then.

Changes in Superficial Burns

The basal epidermal layer was intact. Often there was 'splitting' of the stratum corneum or else this layer had disappeared. Cytoplasmic oedema with pyknosis of the nuclei was often seen. In some slides the basal nuclei were pyknotic. 'Epidermal abscess formation' was often seen, i.e. a round-cell impregnation, with a little exudate in the prickle-cell layer. In some slides, the cells superficial to the prickle-cell layer had disappeared and were replaced by an exudate of necrotic material and white-blood corpuscles.

Changes in Partial-thickness Burns

In some slides, the epidermis appeared intact, i.e. the epidermis still covered the dermis, but the cells obviously were not viable and stained poorly, often with perinuclear vacuolation, elongated and pyknotic basal nuclei, and sometimes nuclear disruption. In the dermis several changes were to be seen. Dermo-epidermal separation occurred in some biopsies, with this space infiltrated by white-blood corpuscles.

The collagen often showed 'banding', i.e. long strands running parallel and into each other. Sometimes leucocytic infiltration occurred between the bands.

The hair follicles varied in appearance from normal-looking follicles to follicles with minor changes, such as intercellular cytoplasmic oedema with poorly staining nuclei.

The sweat glands and many ducts showed no change as a result of the partial-thickness burn. The sebaceous glands showed slight changes, such as fat release by the cells. The changes in the capillaries were never significant, and occasionally intimal thickening of the vessels was seen.

Changes in Full-thickness Burns

The changes were marked in the dermis. The collagen showed the usual banding, with white-cell infiltration in some slides. The hair follicles were affected, the intercellular splitting was marked, and the constituent cells were obviously dead. The sweat-gland ducts were seen as long, homogeneous masses, with a barely discernible cellular element. Many of the sebaceous glands had released their fat, with separation of poorly staining constituent cells.

The cells of the sweat glands also showed changes, with some intercellular splitting and irregularity of the cells. Only a few slides showed actual destruction of sweat glands. The deeper dermal capillaries showed endothelial thickening and, sometimes, thrombosis.

Discussion

Acid and alkali burns are normally due to the splashing of these chemicals on to the hands and/or face. Unfortunately accidents, such as falling bodily into acid or alkali or the plunging of a whole limb into either chemical, are serious. When the worker is soaked with these chemicals, valuable time is lost in removing the clothing.
before treatment is commenced. In these experiments, the effect of soaked clothing was not reproduced, for obvious reasons. These remarks, therefore, are applicable mainly to 'open' contact burns.

The acids and caustic alkalis are hygroscopic, i.e. they remove tissue water and, in addition, combine with protein to form a protein water. The acids soften and can dissolve epithelium and, in contact with tissue water, a thermal burn (increasing the depth of the burn) is added to the main chemical action.

A point to be stressed is that a chemical burn is often insensitive to pin-prick, even in the more superficial cases, and Sevitt felt that it was necessary to wait before grafting. I believe this could be refuted by some of our findings, as will be discussed.

Macroscopic Findings

All burns were inspected on the 3rd day and showed a dry scab, except in one or two cases, where they were treated either with alcohol and ammonia or the 'bicarbonate bomb', when they were moist and obviously full-thickness. Oleum produces a black eschar, in contrast to nitric acid which produces a yellow scab, and can be easily recognized. The alkalis produce an intense erythema, but with the alkalis tested there was far less skin change than with the acids.

Treatment

Evaluation of treatment was the main purpose of these experiments and some definite conclusions were reached.

In experiment 2 where nitroglycerine mixed acid (HNO₃, 39%, and H₂SO₄, 60%) was used, wiping with impregnated rag, or treating with running water or buffered phosphate, gave better results than triethanolamine, alcohol and ammonia, or the 'bicarbonate bomb'. Alcohol and ammonia were the weakest neutralizers and their value is suspect. We were unimpressed by the neutralizing powers of triethanolamine or bicarbonate powder. It must be stressed that the chemical must be wiped and not rubbed off, since it has been shown that rubbing makes the burn worse.

In experiment 3 oleum was used and the effect of water on oleum burns was assessed. In adding measured quantities of water to oleum, there was only a slight temperature rise and it could be accepted that tissue water, likewise, does not rise in temperature sufficiently to produce a more severe burn. Wiping the acid off with a dry rag gave slightly better results compared with the use of running water, but the difference was not marked.

The time relationship is very important. Immediate treatment, whether wiping, or using running water or buffered phosphate, will prevent a serious burn. Buffered phosphate is the most effective, and on the 3rd day the burn had to be excised, and the same findings will not be made available, if no rag is available then water or buffered phosphate must be found as soon as possible. Of the two, buffered phosphate will be most beneficial. In most factories, water vats and showers are placed in certain sites, and it is naturally imperative that new recruits to the factory be informed of these.

A delay of 30 seconds will cause irreversible changes, whatever first-aid treatment is used. When treatment becomes available, running buffered phosphate followed by a buffered phosphate compress is probably of some limited value; this neutralizer certainly does not enter the deeper tissues to neutralize the acid. In such cases, the medical officer should definitely consider primary skin-grafting. Experimentally, it was quite obvious how deep the burn had to be excised, and the same findings will not doubt be made on human skin.

Dressings. Where skin grafting is not contemplated, sterile vaseline-gauze is a good dressing, with the addition of polybactrin powder, if available. Buffered phosphate or triethanolamine dressings are not necessary. If the burn becomes infected, 'furacin' or eusol dressings may be used. Once a slough forms, daily dressings of half-strength eusol with sterile liquid paraffin are very satisfactory.

CONCLUSIONS AND SUMMARY

Speed is the most important factor in treating chemical burns, and fancy neutralizers should not be sought, since this search wastes valuable time. There should be no hesitation in excising the delayed burn and performing primary skin-grafting.

I thank Prof. J. H. Louw, Head of the Department of Surgery, University of Cape Town, and Prof. C. N. Barnard, Director of Surgical Research, for permission to publish and
encouragement in carrying out these studies. Thanks also go to the technicians and staff of the J. S. Marais Surgical Research Laboratory for invaluable assistance, and particularly to Mr. C. C. Goosen for the photography. I am, of course, indebted to Messrs. African Explosive and Chemical Industries for making this investigation possible.

REFERENCE


DIE BASAALMETABOLISME-SNELHEID VAN BLANKE MANS
J. BOOYENS en K. C. HOLEMANS, Departement van Fisiologie en Biochemie, Universiteit van Pretoria, Pretoria

In 'n vroeëre verslag, waarin 'n vergelyking getref is tussen die basaalmetabolisme (B.M.S.) van plaaslike Blanke en Bantuverpleegsters met die van Britse vroue, is dit onder andere bevind dat die B.M.S. van die Blanke verpleegsters nie betekenisvol verskil het van dié van die ooreenstemmende ouderdomsgroep in die Britse vrouebevolking nie. Die moontlikheid is in die vooruitstig gestel dat, indien mans bestudeer word en weer eens geen statistiese verskil tussen die B.M.S. van plaaslike persone en Blanke vroue word gevind nie, die Britse standaard van die B.M.S. van Reid ten einde gebruik sal word. Derhalwe is die B.M.S. van 'n verdere 102 Blanke mans tussen die ouderdomme van 19 en 23 jaar bepaal en statisties vergeel met die ooreenstemmende ouderdomsgroep van die Britse bevolking.

Proefpersone en Metode

102 fisies geondre Blanke mediese studente het as proefpersone opgetree. Die volgende prosedure is deurgaans gebruik: Alleen 'n ligte, lae, proteïnelaatheid is gedurende die aand aan die bepaalde deur die proefpersone genotig. Die volgende oggend is die proefpersone, voordat enige voedsel of drinkwater gedrank is, die proeflewens met die bruiklikheid van die B.M.S. van Britse man in dieselfde ouderdomsgroep. Dit word dus vir Britse man in dieselfde ouderdom groep inangedreven.

Resultate

In Tabel 1 word die gemiddelde waardes vir lengte, gewig, liggaamsoppervlakte en B.M.S., sowel as die getal proefpersone in elke ouderdomsgroep, aangegee.

TABEL 1. GEMIDDELDE LENGTE, GEWIG, LIGGAAMSOPPERVLAKTE EN B.M.S. VAN DIE GETAAL PROEPERSONE IN DIE VERSKILLENDE OUDERDOMSGROEPE

<table>
<thead>
<tr>
<th>Ouderdom (jaar)</th>
<th>Getaal</th>
<th>Lengte (duim)</th>
<th>Gewig (lb.)</th>
<th>Liggaamsoppervlakte (MF)</th>
<th>B.M.S. (Kaal/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>28</td>
<td>70-59</td>
<td>155-89</td>
<td>(2-2)</td>
<td>(16-26)</td>
</tr>
<tr>
<td>20</td>
<td>34</td>
<td>70-95</td>
<td>166-51</td>
<td>(1-91)</td>
<td>(16-80)</td>
</tr>
<tr>
<td>21</td>
<td>24</td>
<td>70-77</td>
<td>167-42</td>
<td>(1-52)</td>
<td>(17-48)</td>
</tr>
<tr>
<td>22</td>
<td>9</td>
<td>70-27</td>
<td>172-57</td>
<td>(1-28)</td>
<td>(23-30)</td>
</tr>
<tr>
<td>23</td>
<td>6</td>
<td>69-85</td>
<td>156-00</td>
<td>(2-37)</td>
<td>(21-25)</td>
</tr>
</tbody>
</table>

* Standaardafwykings word tussen hakies aangegee.

Die regressielin van B.M.S. op ouderdom is bereken: die regressievergelijking van y = 47-554 - 0-239x is gevind van toepassing te wees op die proefgroep. Voorts is die regressielin van B.M.S. van Britse mans tussen die ouderdomme 19 en 23 jaar uit die standaardwaardes van Robertson en Reid bereken. In hierdie geval is degressievergelijking y = 47-554 - 0-465x van toepassing gevind. Die variasie vir die bepalings het 5-777 vir Suid-Afrikaanse mans en 5-733 vir Britse mans beloop.

Ten slotte is die regressie-koeffisiente vir Suid-Afrikaanse Blanke mans met die van Britse mans vergelyk. Geen betekenisvolle verskil tussen hierdie regressie-koeffisiente is gevind nie.

BESPREKING

Uit die vergelyking tussen die B.M.S-waardes van plaaslike Blanke mans met die van Britse mans in dieselfde ouderdomsgroep, is dit duidelijk dat dit Britse standaardwaardes vir B.M.S. van die betrokke groep plaaslik gebruik kan word. In 'n vorige ondersoek is dit aangetoon dat die gemiddelde B.M.S-waardes van die Afrikaanse Blanke vroue nie betekenisvol verskil met die B.M.S. van die Britse vrouesgroep in die Britse bevolking verskil nie.

Die twee lokale proefgroep, in die geval van mans, sluit twee groepie van 18 - 23 jaar, en in die geval van vroue, slags die ouderdom 18 - 26 jaar in.

Vir hierdie ouderdomsgroep is die Britse standaarde beslis van toepassing. Verder studies sal bepaal of in die geval van laer en hoër ouderdomsgroepie diegeselde gevolgtreking geregverdig sal wees.

Aangemoedig dit egter welbekend is dat 'n unifomne afname in B.M.S. met ouderdom in verschillende bevolkingsgroepetere, kan ons verwag dat die Britse standaarde ook vir ander ouderdomsgroepie in die Suid-Afrikaanse bevolking van toepassing sal wees.

OPSMOMING

Die B.M.S. van 102 Blanke mans tussen die ouderdomme 18 - 23 is bepaal. Dit is gevind dat die B.M.S-waardes van plaaslike Blanke mans nie betekenisvol verskil het van die standaardwaardes van Britse mans in dieselfde ouderdomsgroep nie. Die gevolgtreking word gemaak dat binne bogenoemde ouderdomsgroepie Britse B.M.S-standaarde plaaslik aangewend kan word.

VERWYSINGS


RESEARCH FORUM

MESOTHELIOMA OF PLEURA OR PERITONEUM AND LIMITED BASAL ASBESTOSIS
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Mesothelioma is now accepted by the majority of pathologists as an entity, and in recent years diffuse or malignant mesothelioma has been shown to be associated with pulmonary asbestosis in Canada, Holland, South Africa, and Germany. All these cases were primary in the pleura and in subjects who had worked with asbestos in mines or asbestos factories, or who lived in areas where asbestos was mined or treated. In the autopsy service of one teaching hospital we have encountered 7 examples of mesothelioma, 4 in pleura and 3 in peritoneum, all but one in the last 3 years. None had had asbestosis clinically or radiologically where such examination was done, and only one patient had a history of occupational exposure to asbestos. At autopsy in all, the lungs did not show the appearances of asbestosis, but careful examination revealed scattered small carbon-pigmented foci of fibrosis in the basal 1 cm. or so of the lower lobes. These lesions were innocuous and readily overlooked, but in 6 of them the microscopic picture was that of pulmonary asbestosis.

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