The symptoms in life were those of an acute congestion of the lungs with hæmorrhagic effusion.

The post-mortem findings were apparently similar to those found in blast injuries.

It would appear there must have been sufficient compression of the chest at the time of impact to produce a contusion of the lungs.

My thanks are due to Major M. White, *M.C.*, R.A.M.C., O.C. Reception Station, for permission to forward these notes.

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DOWLING, H. F., HARTMAN, C. R., FELDMAN, H. A. and JENKINS, F. A. **The Comparative Value of High and Low Doses of Sulfadiazine in the Treatment of Pneumococcic Pneumonia.** *Amer. J. M. Sci.* 1943, Feb., v. 205, No. 2, 197–203. [11 refs.]

Eighty-one unselected adults with typed pneumococcal pneumonia were treated with an initial dose of 2 grammes of sulphadiazine, followed by 0·5 grammes every four hours until recovery was certain or death ensued. The results obtained were compared with those following the administration to 79 patients of an initial dose of 6 gramme followed by 1 gramme every four hours. The groups were comparable in respect of age groupings, but the percentage of bacteræmic cases was 16·5 in the high dose group compared with 11·1 in the lower dose group. There was no significant difference in fatality in the two groups (6·2 and 10·1 per cent with the low dosage and high dosage, respectively), nor in the incidence of serious complications. The higher dosed cases, however, were slightly more often followed by rapid recovery, and they showed less likelihood of relapse, spread to another lobe, or of delayed resolution. Toxic reactions were infrequent in both groups, and no more numerous in the high-dosage than in the low-dosage group. The fact that decidedly smaller doses of the drug than are usually recommended can effectively be used is considered important, since, in the present emergency, limitation of supply of the sulphonamides may occur at times.

A. JOE.

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CHARGIN, L., SOBEL, N. and GOLDSTEIN, H. **Erythema Infectiosum. Report of an Extensive Epidemic.** *Arch. Dermat. & Syph.* 1943, Apr., v. 47, No. 4, 467–77, 1 coloured pl. [14 refs.]

The diagnosis of erythema infectiosum is not very often made. An outbreak allowing the study of many cases is therefore of importance. This paper deals with an orphanage in New York City, where 80 out of the 137 children were attacked between November 4, 1941, and April 11, 1942. There were 80 primary attacks and 90 relapses, so that in all 170 attacks were observed. "Briefly, the sequence of events is as follows: Almost always the exanthem is the first symptom; rarely mild prodromal symptoms appear in the form of malaise, sore throat, coryza and fever. Nearly always the rash first appears on one or both cheeks in the form of a bright red area; the appearance is as though the cheeks had been slapped. There is slight œdema, and the cutaneous surface is smooth. The erythema stops abruptly at the nasolabial fold and the lower orbital border; occasionally it crosses the base of the nose, producing a butterfly configuration like that seen in lupus erythematosus.

The cartilaginous portion of the nose and the circumoral area are always strikingly pale, the picture simulating in this respect that of scarlet fever. The posterior border of the erythema shades off gradually. In the mild attacks, the exanthem is superficial and fades rapidly; in the more severe, it acquires a deep cyanotic hue and regresses more slowly, feeling hot to the touch. The chin is seldom affected; the forehead, more often. The rash on the face usually lasts one to four days, although occasionally for several weeks. There is no enanthem, except sometimes mild redness of the throat and tongue or red macules on the hard or soft palate. At times simultaneously, but usually within twenty-four to thirty-six hours after the onset on the face, an eruption appears on the extremities, especially the arms, but only in a portion of the cases. The extensor surfaces are commonly attacked. The palms and soles remain free. The gluteal region is frequently affected, while on the trunk, which often remains free, an erythema may appear resembling the rash of rubella. On the extremities, the eruption appears as discrete, minute, bright red macules, which gradually enlarge and may coalesce. Often the lesions become papular. Thus the rash may be morbilliform or scarlatiniform. As time progresses, the central portions of some lesions assume a violet colour or fade completely; thus ringlike or garland-like lesions are formed, as in erythema annulare or erythema gyratum. Occasionally by confluence of lesions a maplike appearance results. On the extremities the eruption usually remains from six to fourteen days, exceptionally up to twenty days; it may clear for hours or days only to reappear, either spontaneously or after slight local irritation. A peculiar cyanotic colouring, like cutis marmorata may remain after the rash disappears."

Girls proved to be most severely affected, whilst the younger boys suffered only mild attacks and escaped all relapses. The eruption was in fact limited to the face in 64·7 per cent of the children. Extensive laboratory and epidemiologic studies failed to throw any light on the causation and it is remarkable that these children attended an independent public school where no other case of infection developed among the other "outside" children. Certainly there is no evidence that carriers exist. The incubation period varied from one to twelve days. There are never any complications. SYDNEY THOMSON.

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AMES, W. R. and ROBINS, M. **Age and Sex as Factors in the Development of the Typhoid Carrier State, and a Method for Estimating Carrier Prevalence.** *Amer. J. Pub. Health.* 1943, Mar., v. 33, No. 3, 221–30, 1 fig. [15 refs.]

Early in the present century Klinger noted the difference in age distribution of temporary and chronic typhoid carriers, the curve of temporary carriers running parallel with that of cases by age, most being children and young persons, whereas chronic carriers were commonest among middle-aged adults and rare in children. The probability of becoming a carrier increased rapidly with age, being about ten times as high at 50 years as at 20 years. Ledingham and Arkwright, among others, also noted the preponderance of adults as chronic carriers and that the majority were females. Möller in 1926 found 64 chronic carriers among 7,125 recovered cases and of them 45 were adult females, 16 adult males and 3 children.

The authors analysed some New York State returns for the years 1930–39, and the following table shows the numbers of cases and carriers :—

TYPHOID CASES AND RESULTING CHRONIC CARRIERS BY AGE, FOR THE YEARS 1930–39 (NEW YORK STATE, EXCLUSIVE OF NEW YORK CITY AND STATE INSTITUTIONS).

Age at time of attack	Number		Per cent cases
	Cases	Carriers	becoming carriers
Under 10	628	2	0·3
10–19	902	3	0·3
20–29	579	12	2·1
30–39	409	18	4·4
40–49	295	26	8·8
50–59	188	19	10·1
60 and over	129	10	7·8
All ages	3,130	90	2·9

Nearly half (1,530 out of 3,130) of the patients were under 20 years of age, but only 5 out of 90 carriers were of this age period. Female cases totalled 1,387, males 1,743 (44·3

and 55·7 per cent respectively) but carriers were 53 and 37 (or 3·8 and 2·1 per cent of cases). In the 40–49 group 20 out of 122 female patients became carriers (16·4 per cent), but only 6 of 173 males (3·5 per cent).

As regards convalescent carriers sex differences were not statistically significant, but the age factor was. At ages 30 and over more than three-fourths were passing the bacteria in their stools in the second week of illness; in the nineteenth week the percentage had fallen to 7·7. Under 30 years, two-thirds were excreting the bacteria in the second week, but by the sixteenth week only 0·8 per cent. An estimation of the number of carriers under 80 years of age in the State (excluding New York City and the Institutions) on January 1, 1940, gave a total of 2,490, or a prevalence of 42 carriers per 100,000 persons under that age; the rate among the 70–79 year group was 340 per 100,000. The rate among children under 10 years of age was less than 1 per 100,000.

In their conclusions the authors remark that carriers among typhoid patients over 30 years of age were nine times as numerous as among younger patients and that approximately 16 per cent of females developing typhoid fever in their fifth decade become chronic carriers.

H. Harold Scott.

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Rütisber. **Observations on the pathogenesis and aetiology of nephritis on the Eastern front during the winter of 1941 to 1942.** *M. m. W.*, **2,** 863, 1942. In *Klin. Woch.*, **22,** 606, 18.19.1943.

Observations on 160 cases of war nephritis showed there was a prodromal stage of five to eight days but this was frequently extended to two or three weeks. The first symptom is lassitude, easy fatiguability, often with influenzal-like short periods of fever. Headache and respiratory difficulty occur early, accompanied by a feeling of thirst and urgency of micturition. With the onset of the disease, there is a hydrops, especially in the face and thorax. There is a slight papilloedema and a hint of slight congestion. A severe degree of congestive bronchitis is frequently associated with pleural exudate and cardiac asthma may be present. There is left-sided cardiac-hypertrophy and often additional involvement of the right side but, on the other hand, there is no secondary dilatation. The first sound is strongly emphasized and bradycardia, 30 to 50 per minute, is striking. This corresponds to the left sided hypertrophy with slight involvement of the right heart which can be demonstrated by X-rays. The frequency occurring "wurmförmigen" contractions are explained as due to œdema of the heart muscle itself and a slight degree of hydropericardium. Indication of pre-nephritic hypertonia is important and this can be explained as due to an infectious toxic angiospastic affection of the capillaries. The presence of hepatitic congestion and renal pain and further, albuminuria, hæmaturia and casts, completes the pathological picture. Along with marked increase in sedimentation rate, leukopenia was found. There was no clinical evidence of uremia. With suitable treatment prognosis was relatively favourable. The author draws the important conclusion that there is a relation between inflammatory glomerulonephritis and hepatitis which leads him to postulate a nephrotropic virus as the cause.

Siede and Luz. **[Aetiology of Hepatitis Epidemica.]** *Klin. Woch.* 1943, January 23, No. 4, 70.

The following is a translation of a German abstract of the paper dealt with :—

It has been possible with the aid of the chorio-allantoic method to cultivate from duodenal fluid a filterable, specific agent which destroys chicken embryos on the average after five days within eight passages. Its behaviour marks it as belonging to the group of filterable viruses. The virus has been successfully demonstrated with some degree of regularity in hepatitis epidemica so that it is probably the cause of this disease. (See also *Bulletin of Hygiene*, 1942, v. 17, 703.)

W. P. Kennedy.

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CANZANI, R. La suerologia de la fiebre ganglionar o mononucleosis infecciosa. **[The Serology of Glandular Fever or Infectious Mononucleosis.]** *Arch. Uruguayos de Med., Cirug. y. Especialidades.* 1942, February, v. 20, No. 2, 104-29. [51 refs.]

In infectious mononucleosis agglutination of sheep's corpuscles is often observable and has been used as a diagnostic aid; also the sera of patients at times give false positives to tests for syphilis and agglutination of certain bacteria, e.g. *Bact. typhosum* and *Bact. paratyphosum* A and B.

The author has investigated these three dicta. The first, by the Paul and Bunnell technique. Normal sera, inactivated by being heated to 56° C., when added in various dilutions to 2 per cent suspensions of sheep's red cells in saline, agglutinated up to 1 : 8, rarely 1 : 16; some cases of acute articular rheumatism and of rheumatoid arthritis up to 1 : 32; but in acute cases of glandular fever even up to 1 : 1024, and in subacute cases to 1 : 256.

As regards the second point: In cases of syphilis inadequately treated, typical glandular fever may appear and subside completely in three weeks and during this time a possible syphilitic reaction may be given, and mask the true disease, but if repeated some six weeks later the W.R. will be found negative. The third point may cause confusion and erroneous diagnosis, for sera of patients with infectious mononucleosis may agglutinate the typhoid group of organisms up to 1 : 640, although no history of enteric infection or of vaccination is obtainable. As a lymphocytosis is also a feature of both diseases the liability to mistake is even greater and reliance must be placed on hæmoculture, rising agglutination titre and the clinical course of the illness.

H. HAROLD SCOTT.

Reprinted from "Bulletin of Hygiene," Vol. 18, No. 5.

Correspondence.

SKI SURGERY.

TO THE EDITOR OF THE "JOURNAL OF THE ROYAL ARMY MEDICAL CORPS."

SIR,—Having been for a time an Assistant Instructor at the Middle East Ski School, I was particularly interested in Major J. C. Watts' article in the August, 1944, number of the *Journal*.

I think that most skiers would be inclined to think that the three weeks period of training described by Major Watts is far too short; but experience at the Middle East Establishment supports his view that it is enough for our purpose. In three weeks of the very intensive training organized there by the well-known skier, Major W. J. Riddell, the progress made by men of the right type was astonishing.

I sent six R.A.M.C. orderlies to be trained by him after a preliminary grounding in Mountain Warfare subjects and they soon earned very good reports. They are now in a Mountain Warfare School in the U.K. and the purpose of this letter is to bring their existence to the notice of any who may in the future need R.A.M.C. skiers as they would form an invaluable nucleus for such a unit, being all Nursing Orderlies, II or I, with some six months' experience of skiing.

Field Ambulance,
B.E.A.;
October 29, 1944.

Yours faithfully,
F. M. RICHARDSON,
Lieut.-Colonel, Royal Army Medical Corps.