

Fibiger J (1898). Om serumbehandling af difteri [On treatment of diphtheria with serum]. Hospitalstidende 6:309-325.

Key passages

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Meddelelse fra Blegdamshospitalet.

Om Serumbehandling af Difteri.

Af

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(I forkortet Form meddelt paa Lægekongressen i Moskwa og i Medicinsk Selskab 30—11—97).

Den eneste Metode, der rationelt kunde anvendes, var at behandle hver anden Patient med Serum, hver anden Patient paa sædvanlig Maade. Den afgørende Betydning, en saadan Fremgangsmaade maa have, er saavidt mig bekendt herhjemme først bleven fremhævet af *Wanscher*¹⁾ ved Diskussionen af Trakeotomiens Betydning ved difterisk Stenose, den er senere omtalt af *P. Heiberg*²⁾ som den statistisk ene rigtige. Metoden var tidligere anvendt i Slutningen af Prof. *Sørensen's* Forsøg. Da den imidlertid frembød praktiske Vanskeligheder, foreslog jeg Prof. *Sørensen* at behandle alle Patienter, der indkom den ene Dag med Serum, men ingen af dem, der indkom den følgende Dag. Disse sidste Patienter skulde da behandles paa sædvanlig Maade.

Prof. *Sørensen* indvilligede heri, mod at jeg paatog mig Forsøgets Udførelse.

Forsøget paabegyndtes 13—5—96 og afsluttede samme Dag 1897. Der injiceredes Serum paa alle de hver anden Dag indlagte, og Injektionerne paabegyndtes strax ved Indlæggelsen, kort efter denne eller saa snart som det blev den vagthavende Læge muligt.

Alle Pat. behandlede med Sol. nitrat. argent. eller Sol. kreolini til Pensling, desuden anvendtes til Gurgling klorsur Kaliopløsning eller Kreolin. De ikke serumbehandlede fik desuden Sol. cyanet. hydrarg. indvendigt (dog ikke de lettere Tilf.).

Der foretoges gentagne bakteriologiske Undersøgelser med *Vatpensler af Svælget hos alle Patienter*. I Tilfælde af Nasofaryngeal-difteri undersøgte tillige Cav. nasi, hos Patienter med Larynx-tilfælde eller Krup desuden Aditus laryngis. Hos 493 Patienter, der indlagdes for Difteritis eller Krup, fandtes ikke Difteribaciller, og disse Pat., der viste sig at lide af follikulære, flegmonøse, skarlatinøse eller pseudomembranøse, ikke difteriske Anginaer, eller Laryngitis, Bronkopneumoni osv. ere udelukkede af Statistiken, der naturligvis kun omfatter Difteripatienter, hos hvem Difteribaciller blev paaviste.

Dog er ikke alle disse medtagne, en Del er udskudt, dels saadanne, hos hvem Sygdommen ved Indlæggelsen var kompliceret med Morbilli, Scarlatina eller Erysipelas, dels Patienter, der ved Indlæggelsen vare moribunde eller i Agone og døde inden 24 Timer efter Indlæggelsen (17 Pat.). Endvidere er udskudt 3 Individuer, der indlagdes med Difteribaciller i Svælget, men ikke frembød nogetsomhelst objektive Tegn til Difteri. Fremdeles maa vi fra vor Statistik endnu drage enkelte Patienter, dels nemlig saadanne, der afslog Serumbehandling (3 lette Tilf.), skønt de ifølge Turnus burde injiceres, dels 2 sværere Tilfælde, som efter Forældrenes og den indlæggende Læges Ønske injiceredes med Serum, skønt de indkom paa »Ikke-serumdage« og endelig til Slut et Par haardt angrebne Patienter fra Forsøgets sidste Tid, som ligeledes mod Turnus behandlede med Serum, da man paa dette Tidspunkt ansaa det for godgjort, at Serumet besad en gunstig Virkning.

Statistiken kommer da til at omfatte **484 Patienter med Difteri og Krup**. Hos dem alle paavistes Difteribaciller. Af disse behandlede

239 med Serum,
245 uden —

Translation

The only method that could be used rationally was to treat every second patient with serum and every second as usual. The crucial importance of such a method, according to my knowledge, has, for the first time in Denmark been emphasised by *Wanscher*¹⁾, during his discussion on the importance of tracheotomy for diphtheritic stenosis. The method has subsequently been referred to by *P. Heiberg*²⁾ as the only statistically correct one. The method was previously applied at the end of the trial by Professor *Sørensen* [*Fibiger's* chief at *Blegdam Hospital*, who had tried to conduct a controlled trial a couple of years earlier. ed.]. As the method had since created practical difficulties, I proposed to Professor *Sørensen* that all patients admitted on one day should be given serum, but none of the patients admitted on the next day. The latter patients were to be treated as usual.

Professor *Sørensen* agreed to this, provided that I conducted the trial.

The trial started on 13 May 1896 and finished on the same day in 1897. All patients admitted to the hospital every other day were injected with serum, the injections starting immediately on or shortly after admission, or as soon as it was possible for the doctor on duty.

[The throats of] All patients were swabbed with silver nitrate solution or creolin solution. In addition, potassium chlorate solution or creolin were used for gargling. Those patients not treated with serum were also given a solution of hydrargyrum cynamum internally (though not the mild cases).

Repeated bacteriological examinations were carried out on all patients using throat swabs. In patients with nasopharyngeal diphtheria the nasal cavity was examined as well. In patients with laryngeal diphtheria or croup the larynx was examined. In 493 of the patients who were hospitalised for diphtheria or croup, no diphtheria bacilli were found. These patients, who suffered from follicular-, phlegmoneous-, scarlet fever-, or pseudomembraneous non-diphtheria anginas, or laryngitis, bronchopneumonia, etc., were excluded from the statistics, which thus include only diphtheria patients in whom the presence of diphtheria bacilli had been proven.

However, not all such patients were included. Some were excluded because their disease on admission to hospital was complicated with measles, scarlet fever, or erysipelas, and some of them because they were moribund or in agony on admission and died within 24 hours (17 patients). Further, three persons were excluded because they were hospitalised with diphtheria bacilli in the throat, but did not have any clinical signs of diphtheria. Furthermore, we had to exclude from our statistics a few more patients: those who refused serum treatment (3 mild cases), although they should have been injected according to the rotation; 2 other more severe cases, who, because of the wishes of the parents and the referring doctor, were injected with serum, though they came on 'non-serum days'; and finally, a couple of seriously affected patients who were admitted during the final phase of the trial, who were also treated with serum against the rotation, as it was considered proven by then that the serum had a favourable effect.

Thus, the statistics comprise 484 patients with diphtheria and croup. Diphtheria bacilli were detected in all of them. Of these

239 were treated with the serum,
245 were treated without the serum

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