International Congress Series 1239 (2003) 711–714

"Obviously impossible"—the application of the inheritance of blood groups as a forensic method. The beginning of paternity tests in Germany, Europe and the USA

M. Okroi *, P. Voswinckel

Institute of the History of Medicine and Science, University of Luebeck, Koenigstrasse 42, 23552 Luebeck, Germany

Abstract

In 1924 in Berlin, Germany, the theory of blood group tests as a method to prove non-paternity was introduced by Fritz Schiff for the first time, and 2 years later, Schiff performed the first successful test, leading to a judgement. After this, the blood tests became popular in the country until the Prussian court for civil law cases doubted the reliability of blood group investigations. Its declaration raised a nation-wide and controversial dispute on blood tests for the next 3 years until the Ministry of Public Health formed a committee on blood group tests, which finally recommended this method for cases of disputed paternity. The introduction of the inheritance of blood groups as a forensic method found a strong international echo. Through the 1930s, other European countries and the United States permitted blood tests, referring to the fundamental work of Fritz Schiff.

Keywords: Blood groups; Paternity tests; History of medicine; Fritz Schiff

1. Introduction

When a lecture about "Blood group diagnosis as a forensic method" was given on the evening of the 24th January 1924 at a meeting of the Medico-Legal Society of Berlin, nobody in the auditorium could foresee that this evening would be the beginning of the

* Corresponding author.
E-mail address: mathias.okroi@student.mu-luebeck.de (M. Okroi).

0531-5131/03 © 2003 Published by Elsevier Science B.V.
PII: S0531-5131(02)00506-X

serological paternity tests [1]. The lecturer was Fritz Schiff who was the head of the Department of Bacteriology at the Municipal Hospital in Friedrichshain in Berlin. In his speech, he explained the principles of those tests to the audience: If the blood groups of the mother and child are known, then, according to the Mendelian laws, one can predict that the assumed father cannot belong to certain blood groups: it is "*obviously impossible*" that a putative father of blood group AB could be the biological father of a child with the blood group 0. Schiff concluded with guarded optimism that at least in some paternity cases, it would be possible to exclude the assumed father as the real father.

This idea found its wide spreading inside the scientific community. Already in September of the same year at the 13th Congress of the German Association of Forensic and Social Medicine at Innsbruck/Austria, Georg Strassmann gave a full account of the first experience with the serological paternity tests at court in Germany [2]. Just a few weeks before that meeting at Innsbruck, Strassmann and Schiff performed the first investigations. However, their results did not lead to an exclusion of the putative fathers. It took 2 more years until Schiff was able to report the first paternity tests, leading to juridical consequences. In 1926 in a case of disputed alimony, a woman and her 13-year-old daughter accused a man being the father of the girl. In this case, Schiff [3] proved non-paternity for the first time. Then only 1 year later in Germany in 385 paternity cases, blood group tests were requested. In 44 cases, an exclusion of the assumed father being the real father was possible. While many courts especially in the south of Germany accepted those tests, the Supreme Court for civil law cases of Prussia denied the reliability of blood group tests. Its president, judge Franz Leonhard was a fundamental enemy of paternity tests. At the 11th October 1927, the Supreme Court published a resolution in which it declared that blood group diagnosis proving non-paternity in the present state of research was not a reliable investigation The validity of these tests was not strong enough to support the term "obviously impossible" [4]. This resolution raised a nation-wide dispute about the reliability of this method. However, not only among the legal profession, but also inside the medical profession the tests were controversially discussed. The coexistence of three different blood groups designations [5] and the incorrect use of blood grouping techniques supported the confusion. Mistakes in the laboratories led to wrong results and were misunderstood as exceptions of Mendelian law. In order to put an end to this confusion, the Ministry of Public Health formed a committee consisting of anthropologists, serologists and forensic scientists. In March 1930, this committee finished its work, recommending that the blood group test is an objective and reliable method to proof non-paternity. The ministry appointed Schiff to the highest court expert of Prussia (Fig. 1).

The medical journals in Europe recognised with great interest the development in Germany. Since the middle of the 1920s, Schiff's articles had been summarised and printed in English and American journals. Schiff's article about the "medico-legal significance of blood groups" in THE LANCET [6] found a strong international echo. This article started a European wide discussion inside the national medical societies about the establishment of blood tests proving non-paternity. In 1931, the Italian government permitted the blood group investigation at court, referring to the results of Leone Lattes, the Italian pioneer of forensic serology, and Fritz Schiff. In Ireland, the first application of blood tests led to judgement in a case of maintenance at Dublin in 1932 [7]. In 1935, the

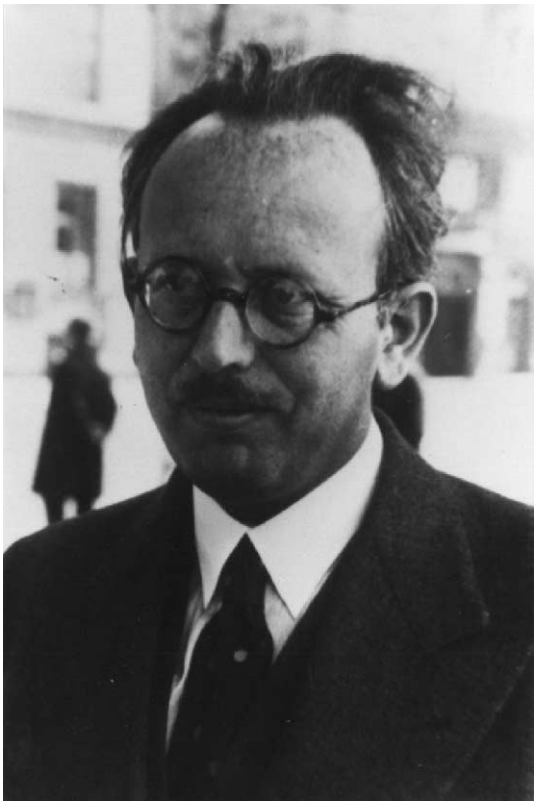

Fig. 1. Fritz Schiff (Berlin 1889–New York 1940). German bacteriologist and serologist who introduced the inheritance of blood groups as a method to proof non-paternity in cases of maintenance.

blood tests were permitted in the USA. Due to the recommendation of Alexander Wiener and Philip Levine, the States of New York and Wisconsin were the first to establish the blood group investigations in cases of maintenance [8]. However, it was not until 1939 that a bill was passed in the House of Lords permitting blood group tests in cases of disputed paternity [9].

References

[1] F. Schiff, L. Adelsberger, Die Blutgruppendiagnose als forensische Methode, Arztl Sachverstand. Ztg. 30 (1924) 101–103.
[2] F. Schiff, Kann eine Blutuntersuchung in Vaterschaftsfragen herangezogen werden? Jur. Wochenschr. 54 (1925) 343–344.
[3] F. Schiff, Die Blutgruppen und ihre Anwendung vor Gericht, Dtsch. Z. Gesamte Gerichtl. Med. 9 (1927) 369–401.
[4] F. Leonhard, Kammergerichtsbeschluß vom 11.10.1927, 8 W 4228/27, Jur. Wochenschr. 2 (1927) 2862–2863.

[5] P. Schmidt, M. Okroi, Also sprach Landsteiner-Blood Group '0' or Blood Group 'NULL', Infus. Ther. Transfus. Med. 28 (2001) 206–208.
[6] F. Schiff, The medico-legal significance of blood groups, Lancet 107 (1929) 921–922.
[7] N.N. Blood-Groups and Paternity, Lancet 110 (1932) 468.
[8] P. Levine, Blood typing method for determining paternity, JAMA 106 (1936) 2069.
[9] D. Harley, G.R. Lynch, Blood-group tests in disputed paternity, Lancet 118 (1940) 911–912.