

HISTORY OF CARCINOID AND PATHOLOGY

CONTRIBUTIONS OF SIEGFRIED OBERNDORFER TO PATHOLOGY AND EVOLUTION OF CARCINOID

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The famous pathologist Siegfried Oberndorfer was born in Munich, Germany, in 1876, studied medicine at the University of Munich, and became the youngest Jewish physician to be appointed to its faculty (1907). He carried out innovative studies in the fields of pathology and evolution of carcinoid as the chair of the Department of Experimental Pathology at the University of Istanbul in Turkey, where he was a Jewish refugee escaping from the political situation in Germany before the Second World War with the rise of Nazism. This paper deals with Oberndorfer's very valuable contributions to the Department of Pathology of Istanbul University in Turkey and seeks to confirm his well-deserved place in the universal medical field of pathology and discovery of the carcinoid tumour.

Key words: Siegfried Oberndorfer, Istanbul University, carcinoid tumour, pathology, the rise of Nazism in Germany.

When the Turkish Republic was founded in 1923, Turkish scholars and politicians were dissatisfied with the situation of Istanbul University and the conservative stance of the University perturbed the ruling elite. In the 1930s, in the Weimer Republic of Germany, the dominant National Socialist Party dismissed and denationalized thousands of academics due to political dissidence.

When addressing Parliament at the 1933 opening ceremony, Atatürk asserted that the University required profound structural and functional reform. The first requirement was to reorganize the University according to Western European standards. Prof. Malche from Geneva was asked to prepare a reform programme and in 1932 he presented the reform programme that he had prepared. Meanwhile, Prof. Schwarz had organized the dismissed academics from Germany to come to Turkey and authorities from the Ministry of Education in Turkey signed contracts with the scientists [1].

Those immigrant movements ended in 1945 with the end of the Second World War and only a small number of the immigrant scientists stayed in Turkey after 1956. Some of them died in Istanbul or Ankara

and some of them were invited to the U.S.A. and continued their studies there. Others returned to Germany between 1949 and 1956 [1, 2].

Foreign Scientists in the Higher Education Reform of 1933

Philippe Schwartz, a professor of medicine (1894-1977), founded the "Charity Association for German Scientists in Exile" to support the dismissed academics from Germany. In 1933, Schwartz and his colleagues agreed to collaborate with Turkish academics to elevate the quality of higher education [1, 2]. The expatriate professors arrived in Istanbul at the tenth anniversary of the Foundation of the Republic and one of them was the famous pathologist Siegfried Oberndorfer (Fig. 1).

Nearly all the professors were refugees who had come with the help of the Charity Organization and the foremost among these professors were: Siegfried Oberndorfer (1876-1944), Fritz Arndt (1885-1969), Hugo Braun (1881-1963), Max Clara (1899-1966), Friedrich Dessauer (1881-1963), Hans Reichenbach (1891-1953), Erich Frank (1894-1957), Alfred Kantorowicz (1880-1962), Erch Auerbach (1892-

1957), Philippe Schwartz (1894-1977), Gerhard Kessler (1883-1963), Leo Spitzer (1887-1960), and Rudolf Nissen (1896-1981) [1-3].

We aimed in this study to present Oberndorfer's contributions to pathology and evolution of carcinoid, which is a very important topic of pathology and many other medical disciplines today, as well. (Fig. 2, Fig. 3,



Fig. 1. Prof. Dr. Siegfried Oberndorfer ("Album of Medical Professionals in Istanbul University. 1935–1936" from the archives of the Department of Medical Ethics and Medical History in Cerrahpaşa Medical School, Istanbul University)

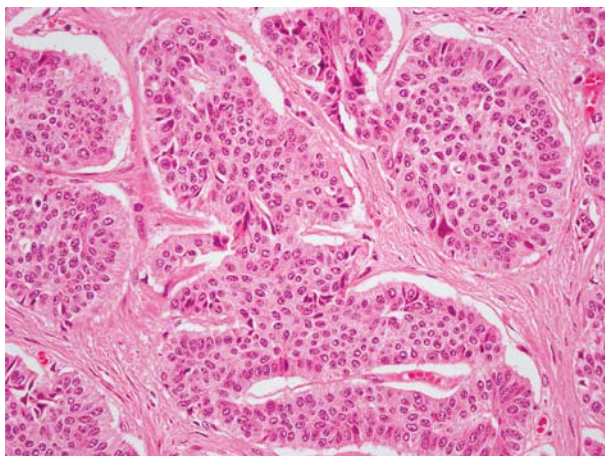


Fig. 2. Well differentiated neuroendocrine tumour (carcinoid tumour HE \times 400) (Supplied by Prof. Sibel Erdamar M.D., professor of pathology from the archives of the Department of Pathology, Cerrahpaşa Medical School, Istanbul University)

Fig. 4) As an original contribution, we made use of personal files of German scientists and contracts they signed in the archives of Istanbul University (Fig. 5), his grandson's letter presented in the pathology congress in Istanbul that described his grandfather's scientific environment, stay and studies in Istanbul, and events in the European Pathology Congress organized in Istanbul where his grandson was invited (Fig. 6) – very sentimental moments were witnessed as he read his letter to the participants.

Prof. Dr. Siegfried Oberndorfer

Siegfried Oberndorfer was born in Munich, Germany, on 24.6.1876. He studied medicine at the University of Munich and got his diploma in medicine in 1900 [3]. He had taken part in the scientific research group of the Pathological Anatomy Institute of Munich University since he was highly interested in pathology while he was a student of medicine [3-5]. He worked as an assistant in both Geneva and Munich Medical Schools until 1905. In 1906, he became an associate professor alongside Prof. Dr. V. Bollinger with his thesis on "Chronic Appendicitis". He became the youngest Jewish physician to be appointed to its faculty in 1907. His observations regarding multiple small-intestinal tumours were presented at the German Pathological Society convention, where he used the term *karzinoide*. This responsibility belonged to S. Oberndorfer, who became the first to adequately characterize the nature of these tumours (Dresden, Germany September 1907) and published his findings in December of the same year. (Fig. 7) [4].

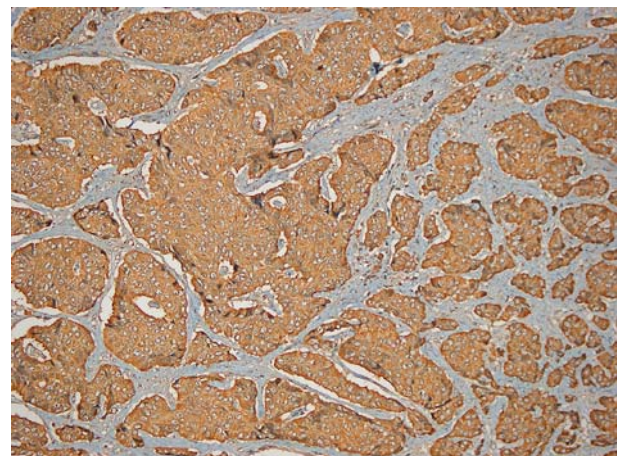


Fig. 3. Diffuse and strong chromogranin-A immunostaining in the same carcinoid tumour. HE \times 400 (Supplied by Prof. Sibel Erdamar M.D., professor of pathology from the archives of the Department of Pathology, Cerrahpaşa Medical School, Istanbul University)

In 1908, he took part in establishment of the newly opened Pathology Department of Schwabing Hospital with 200 beds in the north of Munich. He became director of pathology in this hospital after 1911 and worked there for 22 years [3, 6].

He joined the front line in the First World War as a volunteer and battled in Lille in 1915. He had severe pneumonia and pleurisy in the serious influenza epidemic in 1918 [6].

In 1929, he amended his classification of *karzinoide* to include the possibility that these small bowel tumours could be malignant and also metastasize. The rise of Nazism led to termination of his position in 1930 and he emigrated to Turkey to serve as the chair of the General and Experimental Pathology Institute at Istanbul School of Medicine, where he remained until his death in 1944 [4, 5].

The service of these scientists was secured for Turkish Universities by contracts signed by individual professors and the presidents of universities on behalf of the Turkish Government [7, 8]. Those contracts basically described the conditions of work and their rights. They were supposed to learn Turkish well enough to read in 3-5 years to publish Turkish scientific books. In their first year of scientific service, the expatriates were allowed to bring their assistants and technicians from abroad [9].

Prior to his appointment to the General and Experimental Pathology Institute at Istanbul University, Oberndorfer had signed a personal contract, as well. Among the most important points in that original agreement are the following [7] (Fig. 5):

S. Oberndorfer has full authority for the appointment of his associates in the institution; his position has scientific, administrative and managerial responsibilities and his authority over the professors of pathology is not negotiable. In keeping with his contract, Prof. Oberndorfer distinguished himself by giving excellent lectures and writing textbooks of pathology in Turkish, such as: General Pathology (Istanbul, 1937), Atlas of Abdominal Organs (Istanbul, 1935), Pathology of Rheumatism (Istanbul, 1935) and Histological Diagnosis of Selected Tumours (Istanbul, 1941). He trained many qualified



Fig. 4. Evolution of the worldwide known topic of carcinoid (Today books are written about carcinoid.)

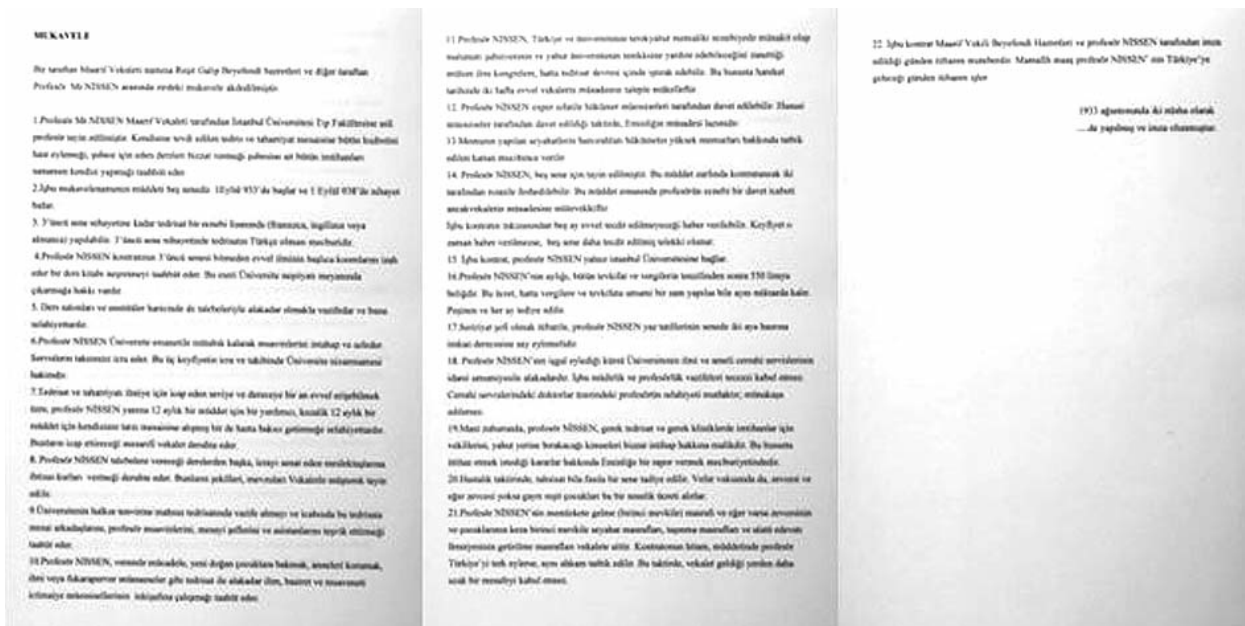


Fig. 5. Photograph of the original contract signed by Prof. Oberndorfer and a representative of the Ministry of Education (Archives of Istanbul University in the Rectorate Building in Beyazit)



Fig. 6. Daughter and son of Prof. P. Schwarz and grandson of Prof. Oberndorfer when Prof. Oberndorfer and Prof. Schwarz were commemorated at the 21st European Congress of Pathology in Istanbul (After the 21st European Congress of Pathology. Turkish Journal of Pathology. <http://www.turkjpath.org/text.php3?id=634>. accessed at 19 Jan 2010 and archives of the local organizers of the congress)

AUS DER PROSEKTUR DES STÄDTISCHEN KRANKENHAUSES MÜNCHEN R. I.
(PROSEKTOR: PRIVATDOZENT DR. OBERNDORFER.)

Karzinoid Tumoren des Dünndarms.

Von

Siegfried Oberndorfer.

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Fig. 7. Cover of the original article on carcinoid tumour published in December 1907 by Prof. Oberndorfer (Supplied by Prof. Sitki Tuzlali, professor of pathology in the Department of Pathology in Istanbul Medical School in Istanbul University to İnci Hot PhD, co-author of the article)

pathologists, including Sedat Tavat, Uveis Maskar, Osman Saka and Sat? Eser. He also worked in the Cancer Research Institute for 11 years. He was the author of many scientific papers, as well [3, 10, 11].

He was always remembered with respect and gratitude by the Turkish scientists in Istanbul University. The 21st European Congress of Pathology was organized by the Turkish Society of Pathology, where local organizers were well known pathologists from Istanbul University, during 8–13 September 2007, with 2394 participants from various countries. In the opening ceremony, the founders of modern pathology Hamdi Suat Aknar, Philippe Schwarz and Siegfried Oberndorfer were commemorated and feelings of gratitude were expressed [12]. The son and daughter of Prof. Philippe Schwarz and grandson of Prof. Oberndorfer were invited to the congress (Fig. 6) and were honoured with a plaque. Those were very sentimental moments for the participants.

Oberndorfer's grandson Dr. Walter L. Castrillon-Oberndorfer wished to gratefully thank the organizers of the congress in the name of all family members from Germany, Colombia, USA and Argentina [13]. He wanted to present some recollections regarding his grandfather: He quoted the professor's memoirs dated 15.12.1936.

“Decision regarding the foundation of the Institute of Cancer. I feel released and very happy”. Prof. Oberndorfer mentioned that Turkey appeared to him as a second home. He and his wife felt happy with their new close friends and he was very content with his work, colleagues and students. In 1937 Dr. Walter and his mother arrived in Istanbul from Colombia for a visit to his grandparents. He remembers the professors, assistants and friends of his grandfather such as: Fahri Arel, Perihan Cambel, Üveis Maskar, Mazhar Osman, Sati Eser, Izzet Kandemir, Fritz Arndt, Hugo Braun, Erich Frank, Rudolph Nissen, Philippe Schwarz and many others. His last visit to Istanbul was in 1962 [13].

On March 4, 1939, the invitation from the President of Turkey, İsmet İnönü, to five o'clock tea in his residence in the Dolmabahçe Palace was a great event for Prof. Oberndorfer.

The most beloved toys for his grandson were a wooden train set and two puppets that were hand-made by Prof. Oberndorfer. Dr. Siegfried Oberndorfer found time for mountain hiking, skiing and photography. He had a great collection of pictures of the Turkish people and of the wonderful Turkish landscape [13].

Due to World War II, he could no longer visit his grandparents. Dr. Oberndorfer, who passed away on March 1, 1944, was buried in Istanbul and family members regularly visit the gravesite [13].

Conclusion

In the years of studying in Germany, S. Oberndorfer made systematic studies of tumours such as carcinoid tumour, primary alveolar cancer of the lungs, and certain tumours of the gonads such as seminoma.

After 1933, he came to Turkey on the invitation of Istanbul University and was assigned as director of the General and Experimental Pathology Institute in Istanbul School of Medicine. Besides his pathology studies in the Medical School, he was also appointed to the directorship of the Cancer Research Institute. He has educated many scientists in Turkey, published many scientific papers and paid great attention to examination of biopsy and autopsy materials coming from hospitals all around the country.

He loved photography and making toys for his grandson despite his heavy load of scientific studies.

The famous pathologist, the first to define carcinoid, succumbed in March 1 of 1944 to a mediastinal tumour diagnosed too late! Scientists in Turkey have not forgotten his "light of science", having recently commemorated him in the European Congress of Pathology organized in 2007 in Istanbul, sharing the memories with his grandson and all the other participants.

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