



Untold Story of an Intercontinental Pioneering Neurosurgeon: Vahdettin Turkman, M.D.

Eyup BAYATLI¹, Selcuk PALAOGLU^{2,3}

¹Ankara University, School of Medicine, Department of Neurosurgery, Ankara, Turkey

²Acibadem Ankara Hospital, Department of Neurosurgery, Ankara, Turkey

³Hacettepe University, School of Medicine, Ankara, Turkey

Corresponding author: Eyup BAYATLI ✉ e.bayatli@hotmail.com

ABSTRACT

AIM: To present one of neurosurgery's earliest pioneers, Dr. Vahdettin Turkman, who contributed to neurosurgical practice globally from east to west (Iraq, Turkey, England, Germany and the United States) in the early 1960s.

MATERIAL and METHODS: This paper is the result of numerous interviews conducted in Turkey, Iraq, USA, and Canada.

RESULTS: During Dr. Turkman's brief life, he accomplished a great deal that contributed to the global advancement of modern neurosurgery.

CONCLUSION: Dr. Turkman's contributions and achievements have inspired many neurosurgeons trained at Ankara and Hacettepe Universities, Neurosurgery Departments in Turkey, and around the world. We honor Dr. Turkman and pay tribute to his memory.

KEYWORDS: Global neurosurgery, History of neurosurgery, Pioneers of neurosurgery, Turkish neurosurgery

ABBREVIATION: USA: United States of America

INTRODUCTION

The history of neurosurgery is littered with pioneers who established the science and inspired future generations to practice evidence-based neurosurgery worldwide. Many of these neurosurgeons have already been recognized, but there are still undiscovered revolutionary heroes whose achievements continue to inspire future generations. In the early 1960s, one of neurosurgery's earliest pioneers, Dr. Vahdettin Turkman, contributed to neurosurgical practice globally from east to west. This paper is the result of numerous interviews conducted in Turkey, Iraq, United States of America (USA), and Canada, for which Prof. Selcuk Palaoglu, M.D., Ph.D. was tasked by the late Profs. Aykut Erbenli, M.D., and Vural Bertan, M.D. During his brief life, Dr. Turkman accomplished a great deal that contributed to the global advancement of modern neurosurgery.

Turkman's Life and Career

Vahdettin Tefvik Turkman was born on December 30, 1924, in Kirkuk, Iraq, to the Sheyhlerzade Turkman family. He graduated from the Faculty of Medicine at Istanbul University, Turkey, in 1947 (Figure 1). He returned to Iraq after graduation and joined the army to complete his military service (Figure 2). Because of his strong interest in neurosurgery, he decided to pursue a residency program in the USA. He specialized in neurosurgery at the University of Pennsylvania, USA, under the supervision of Dr. Francis Grant at the University of Pennsylvania Graduate Hospital (8).

Dr. Turkman intended to continue his career in Iraq after specializing in neurosurgery. He returned and worked there for a time (Figure 3) but was forced to leave due to political issues in Iraq in 1958. He relocated to Turkey and began the visa application process to return to the USA. The larger goal of Dr. Turkman was to continue his research and improve

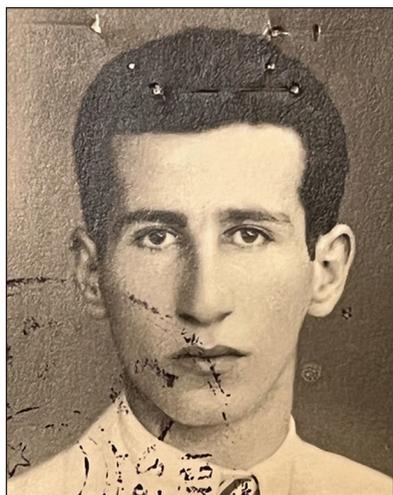


Figure 1: Dr. Turkman (date unknown).

neurosurgical practice. It is known that he worked in England and Germany for a time, but no precise information is available. While in Turkey, he was invited to establish the Neurosurgery Department at Hacettepe Children’s Hospital. He established and contributed to the department until he moved to the USA in the spring of 1960, where he worked until his death (Figure 4).

Dr. Turkman married Kirsten Violet Pedersen, a nurse, in August 1962 (Figure 5). Yasemin and Erik Falk were their two children (Figure 6). He got his helicopter pilot’s license (registered on the USA Civil Aircraft List; Figures 7 and 8) so he could fly to nearby hospitals for neurosurgical emergencies. He enjoyed tea, music (particularly Beethoven), and horseback riding as hobbies. Dr. Francis Wood (“Frank”), a friend from his residency at the University of Pennsylvania, recalls them riding together fondly. Their residency program left little time for leisure, but when their schedules could be coordinated, they enjoyed renting horses for an hour and riding in the Philadelphia suburbs. They would find an open field, and Frank joked that “Turk” (Dr. Turkman’s nickname) would gallop



Figure 2: Dr. Turkman’s military ID (translated from Arabic: Iraq military forces group no 430; Class/military rank: Doctor/leader; Name & Father Name: Wahdeddin Tawfiq; Folder No: 105; Date & Place of Birth: Kirkuk/1924; Date of participation to the army: 03/02/1948. Signed by the staff colonel).



Figure 4: Dr. Turkman (date and location unknown).



Figure 3: Dr. Turkman (date unknown).



Figure 5: Dr. Turkman and his wife, pregnant with Yasemin (date and location unknown).

his horse like a “Turkish Calvary charge.” They would return to the stables with Turk’s horse “all lathered up.” Dr. Turkman is remembered as a witty man who could connect with people from all walks of life.

On August 27, 1965, Dr. Turkman was killed in a car accident while driving to the hospital for an emergent case of subarachnoid subdural hematoma. He was 40 years old. His wife was pregnant with his second child (Erik Faik) and sadly, they never met. Dr. Turkman was laid to rest in Pittsburgh, Pennsylvania (Figure 9) (10).



Figure 6: Dr. Turkman with his daughter, Yasemin (1963/1964 in Pittsburgh, PA).

TURKMAN’S PROFESSIONAL ACHIEVEMENTS and CONTRIBUTIONS

The United States (the First Period)

Dr. Turkman’s achievements in neurosurgery during his brief career stand out. Unfortunately, the specifics of his contributions are lost in the memories of his family, friends, and even patients. Furthermore, records of training from that time period are scarce, as neurosurgery training was in its early stages in the early 1950s, and formal residency programs in the USA were not well developed.



Figure 7: The registry of Dr. Wahdeddin Turkman on the United States Civil Aircraft List.

2187E FAC5761	211 01 46	2 170 03	2 11	MCMANON LELAND S	AT 2	REIDSVILLE	NC
2187F U2060387	207 33 65	2 170 32	2 13	AIRCRAFT CHARTERS INC	R151 TELEPHONE RD	HOUSTON	TX
2187G 51487	207 27 38	2 170 26	2 13	BOMMER FLYG SVC INC	BLUE GRASS FLD	LEXINGTON	KY
2187H 2610	042 03 48	2 170 05	2 11	WHITE JOSEPH G	437 MARY ST	MARICOPA	CA
2187K 4414	419 01 47	2 170 08	2 11	PATTEKSON & W	4924 CLIFF WY	ARCATA	CA
2187N 12423	207 16 47	2 170 08	2 11	CLEMENTS D J	3 SOUTHEAST ST	MORGAN CITY	LA
2187V 14416	207 16 48	2 170 09	2 11	KLECKNER CHARLES R	RD 1	NEW MILFORD	PA
2187X 1370087	207 57 65	1 170 25	2 23	EXECUTIVE FLIGHT INC	PO BOX 8146	TULSA	OK
2187Z 16051287	207 26 63	2 170 26	2 11	BENNETT JACK	927 SOUTH HULETT AVE	HORSHEADS	NY
2187S 2680	310 05 38	2 170 08	2 11	FASLER RICHARD F	421 PALMER AVE	PALMER	NY
21879 2657	710 05 38	2 415 05	2 11	MCMANON LELAND S	R 2	REIDSVILLE	NC
2188A 20895	710 20 52	2 415 09	2 11	OLSON MARTIN L	BOX 166	NOME	AK
2188B 6035	819 01 49	2 170 08	2 13	HURRICANE FLD CLUB INC	RT 1 BOX 259 A	HURRICANE	NY
2188C 10173	207 31 56	2 350 07	2 11	BRAMLETT INC HOLTSON	R R 1 RTE 202	TIPP CITY	OH
2188E FAC5762	211 01 46	2 170 03	2 12	HT 13 FLYING CLUB	619 MICH AVE	MONROE	LA
2188G 51488	207 27 38	2 170 26	2 13	GREEN KENNETH H INC	50 KEARNEY RD	NEEDHAM HTS 94	MA
2188H 12424	207 16 47	2 170 08	2 11	KAZMERSKI JOHN T	4501 E 10 ST	TUCSON	AZ
2188P 23797	710 23 56	3 415 08	2 21	FERRON PETER P JR	R 14 ST	BANGOR	ME
2188U 350	144 05 64	4 415 14	2 11	TURKMAN WAHDEDDIN T	120 N LANG AVE	PITTSBURGH	PA
2188X 1370088	207 57 65	3 415 15	2 26	CESSNA ACFT CO	5800 PAWNEE RD	WICHITA	KS
2188Z 16051288	207 26 63	2 170 26	2 13	MARIE ACFT INC	MUNE APT	MIAMI	OK
21891 2659	710 05 38	2 170 08	2 11	PICKELL JACK W	POSTMASTER P O	WARREN	IO
21894 4415	710 06 38	2 170 03	2 11	TOOKER JUNIOR C		LONDON	OH
21895 2666	710 05 38	2 170 03	2 12	CARUL CITY FLYING CLUB INC	NORTH PERRY AIRPORT	WEST HOLLYWOOD	FL
2189N 2667	710 05 38	2 415 02	2 11	MARTINEK RICHARD W	308 BUTTERNUT AVE	ST PAUL PARK	WA
2189A 22606	710 22 52	2 415 06	2 11	HONTER GRADY L	709 S SAMPSON AVE	DUNN	NC
2189B 6010	819 01 49	2 170 08	2 11	FLEEMAN PHIL L	24 HUTTON AVE APT 33	WEST ORANGE	NJ
2189C 16174	207 31 55	2 350 06	2 11	BURKHARTSMEIER EDWARD A	NO 6 THIRD ST	PINDOT	ND
2189D 03536	115 15 53	2 170 14	2 11	SABA F I MD	R W HARRISON	ROZEMAN	WI
2189E FAC5763	211 01 46	2 170 03	2 11	RASOR WALTER A	R R 2	BROOKVILLE	OH
2189F U2060389	207 33 65	2 170 32	2 13	CESSNA ACFT CO	5800 PAWNEE RD	WICHITA	KS
2189G 51489	207 27 38	2 170 26	2 13	JOHNSON INC WALLACE E	875 RAYNER	MEMPHIS	TN
2189H 2612	042 03 48	2 170 08	2 11	GRATSON KENNETH B	40 DDN STREET	EAST PATCHOUGE L I	NY
2189P 23798	710 23 56	3 415 08	2 21	WALKER MARVIN		CLNEY	IL
2189U 400	144 05 64	4 415 15	2 11	COOK PERCY LEE	BOX 435 209 S MAIN	MANSFIELD	TX
2189V 14418	207 16 48	2 170 08	2 12	PANAIA FLYING CLUB	190 BELLMORE RD	EAST MEADOW	NY
2189X 1370089	207 57 65	3 415 15	2 23	SUN VALLEY AIR SVC INC	2400 AIRLENE WAY	PHOENIX	AZ

Figure 8: The registry of Dr. Wahdeddin Turkman on the United States Civil Aircraft List.



Figure 9: The commemorate ceremony published in Kardeşlik magazine (Kirkuk/Iraq) about the loss of Dr. Turkman (Dated: October, 1965).

During our research on Dr. Turkman, we discovered the following certificates: Resident Physician in Neurosurgery at the University of Pennsylvania Hospital (June 1953–1956; Figure 10); Resident in Neurosurgery at The Children’s Hospital of Philadelphia between June 1 and December 31, 1954 (Figure 11); board certification from the American Board of Neurological Surgery (October 1955; Figure 12); Fellow of the American College of Surgeons as qualified in the Art and Science of Surgery (October 1958; Figure 13); and membership to the Congress of Neurological Surgeons (October 1961; Figure 14). Also, in 1957, he was listed as “Wahdeddin Turkman” in the directory of Neurological Surgeons in the USA (11).

Iraq

Dr. Turkman returned to Iraq after his initial training in the USA to become the modern Iraq’s first known neurosurgeon. Based on our research, he is believed to have founded the Department of Neurosurgery at Baghdad University and worked in private practice in Kirkuk in the late 1950s (14). He performed complex neurosurgical procedures for conditions, such as hydrocephalus, tumors, and trauma, and he was the first in Iraq to use modern neurosurgical procedures.



Figure 10: Certificate of residency as physician in neurosurgery at the University of Pennsylvania Hospital (June 1953–1956).

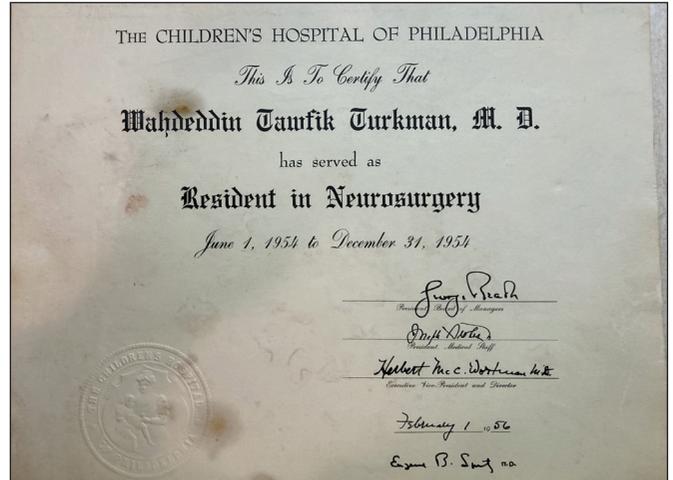


Figure 11: Certificate of residency in neurosurgery between June 1 and December 31, 1954, at The Children’s Hospital of Philadelphia.

Turkey

Dr. İhsan Dogramaci, the founder of Hacettepe Children’s Hospital (formerly the “Child Health Scientific and Social Research Institute” in 1956), invited Dr. Turkman to establish the hospital’s neurosurgery department after leaving Iraq (3). Dr. Turkman accepted the invitation, founded the department, and worked in it for the first 10 months (Figure 15) (7). Thus, Dr. Turkman established the first neurosurgery training center in Ankara (the third in Turkey) in 1959 (8).

During the 1958–1959 academic years, this department had great success in many fields of medicine, including neurosurgery. Later on, the institute established two of Turkey’s most important neurosurgery departments at Hacettepe and Ankara Universities. In 1963, Hacettepe School of Medicine became part of Ankara University, and in 1965, it became an independent university led by pioneer neurosurgeons Profs. Aykut Erbenji, M.D., and Vural Bertan, M.D. Until 1965, Dr.

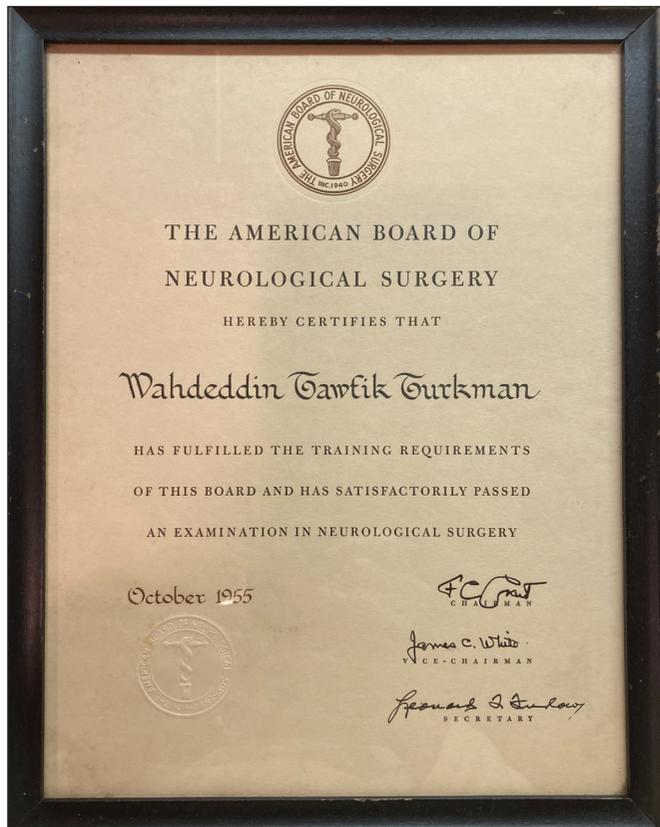


Figure 12: Certificate of the American board of neurological surgery (October 1955).

Nurhan Avman oversaw the department established by Dr. Turkman (1,3).

Dr. Yuksel Bozer, one of Hacettepe University's former rectors, emphasized that Dr. Turkman established the department and influenced all of his colleagues (2). Dr. Aykut Erbenli, another pioneer of Turkish neurosurgery, stated that Dr. Turkman brought all of his neurosurgical equipment from Iraq in the spring of 1959 to assist in the establishment of the department at Hacettepe University, allowing patients to be operated on as soon as possible (4,5). Dr. Turkman was an exceptional neurosurgeon because of his theoretical knowledge and surgical abilities. Dr. Erbenli emphasized in a letter to Dr. Avman dated June 1, 1960, that neurosurgical operations began due to Dr. Turkman's extraordinary efforts. More than 60 patients were operated on during this time period, including cases of posterior fossa and hemispheric tumors, hydrocephalus, subdural hematomas, and meningocele and myelomeningocele (6,7,12,13). Dr. Turkman coauthored two publications in Turkish on the surgical treatment of hydrocephalus and hemispherectomy that were published between 1959 and 1960 (12,13). The first ventriculoarterial shunt operation in Turkey was also performed by Drs. Turkman and Erbenli (9). In late 1959, Dr. Turkman left Hacettepe for the USA.

The United States (the Second Period)

Dr. Vahdettin Turkman worked at Citizens General Hospital in

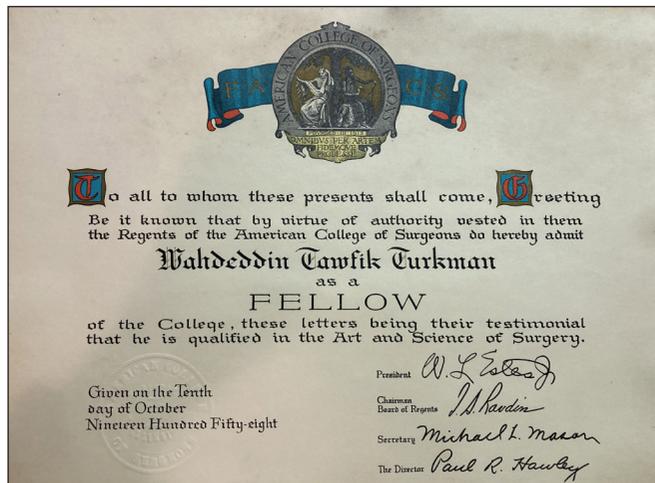


Figure 13: Certificate of fellowship at the American College of Surgeons (October 1958).

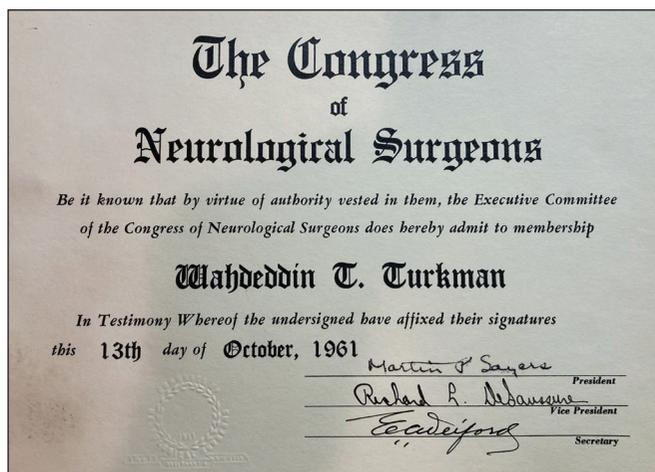


Figure 14: Certificate of membership of the Congress of Neurological Surgeons (October 1961).



Figure 15: An original picture from Dr. Palaoglu's archive signed by Dr. Turkman during his working period at the Hacettepe University.

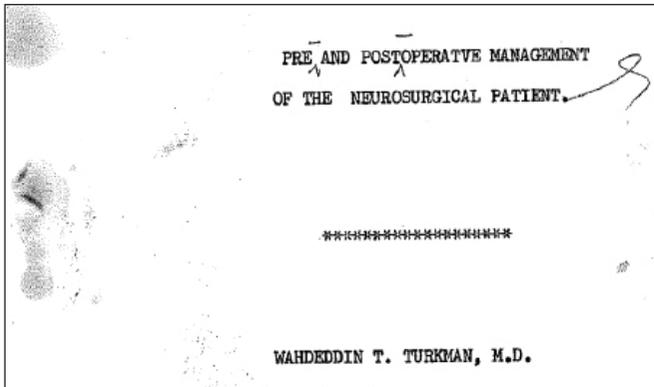


Figure 16: Cover page from the unpublished book by Dr. Turkman.

CONTENTS	
Chapter	Page
I. General Considerations.	1
II. Cranial Trauma.	33
III. Intracranial Space Occupying Lesions.	44
IV. Congenital Malformations & Pediatric Problems	71
V. Spine and Cord Lesions.	93
VI. Procedures For the Relief of Pain.	113
VII. Peripheral and Cranial Nerves	125
VIII. Miscellaneous.	144
BIBLIOGRAPHY.	149

Figure 17: Contents page from the unpublished book by Dr. Turkman.

New Kensington, Pennsylvania, and several other hospitals in the Pittsburgh area. Unfortunately, no information could be obtained from the institutions because the registration system in those years was not available today.

Dr. Turkman dedicated nearly all of his time to improving neurosurgical practice and patient care. After his death, a book manuscript titled *Pre and Postoperative Management of the Neurosurgical Patient* was discovered. The contents of chapters, such as “General Considerations,” “Cranial Trauma; Intracranial Space Occupying Lesions,” “Congenital Malformations & Pediatric Problems,” “Spine and Cord Lesions; Procedures for the Relief of Pain,” and “Peripheral and Cranial Nerves,” are reflected on the first pages of the book (Figures 16–18). This unpublished manuscript exemplifies his significant contributions to modern neurosurgical practice and evidence-based patient care.

Dr. Vahdetin Turkman was a wise neurosurgeon who influenced his generation’s approach to more modern neurosurgery. The many successes he achieved in his brief life make us wonder what else he could have done to advance neurosurgery had he lived longer. Today, more than a half-century later, we recognize all of the contributions made by such a fully dedicated outstanding neurosurgeon who contributed to the advancement of neurosurgery from east to west.

Introduction

Although neurological surgery consists for the most part of diagnostic methods and operative procedures, the management of the patient plays an important part in the success and final result. Therefore, better knowledge and acquaintance with this aspect of the subject is very helpful, and is as important as familiarity with operative techniques.

Knowledge of indications for operation, preparation of the patient for operation, and, moreover, post-operative handling of the patient's condition and complications is not only necessary to the neurosurgeon, but will also be of great help to the nurses, interns, residents, and other members of the medical profession. This is especially true where a neurosurgeon is not always available, and in hospitals where a neurosurgical resident is not present.

The management of pre-operative conditions, work-up, and post-operative care of the neurosurgical patient differs in each instance, and in each school. As yet there is no accepted routine or method to be applied universally. In almost every major clinic the abovementioned procedures differ. In this monograph, however, an attempt will be made to outline the methods which have been developed at the Hospital of the University of Pennsylvania after approximately 40 years' experience, and personally observed at other major clinics in this country. I hope this monograph, inspite of being incomplete at the present time, will be of help and guidance to the medical profession in the management of the neurosurgical patient.

Figure 18: Introduction from the unpublished book by Dr. Turkman.

Obeisance

We have been inspired by Dr. Turkman’s contributions and achievements as many neurosurgeons trained in Ankara and Hacettepe Universities, Neurosurgery Departments in Turkey, and around the world. We honor Dr. Turkman and pay tribute to his memory.

■ ACKNOWLEDGMENTS

The authors would like to thank Kadriye Ciftci (New York), Şirin Başarankut (Ankara), Zeyd Erbil (Ankara), Suphi Bayatli (Kirkuk/Ankara), İbrahim Aga (Kirkuk), Suphi Saatçi (Istanbul), Daniel Yoshor (Pennsylvania), Murat Yurdakök (Ankara), Dr. Francis Wood (Montclair), and especially Yasemin Turkman (Charlottesville), Dr. Turkman’s daughter, for her valuable contributions and providing valuable information during data collection.

AUTHORSHIP CONTRIBUTION

- Study conception and design: EB, SP
- Data collection: EB, SP
- Analysis and interpretation of results: EB, SP
- Draft manuscript preparation: EB, SP
- Critical revision of the article: EB, SP
- Other (study supervision, fundings, materials, etc...): EB, SP
- All authors (EB, SP) reviewed the results and approved the final version of the manuscript.

■ REFERENCES

1. Ankara University Faculty of Medicine: XXV: Year of Department of Neurosurgery. Ankara: Ankara University, 1990. (Ankara Universitesi: Tıp Fakültesi, Nöroşirürji Kliniği XXV. Yıl).
2. Bozer Y: The First 30 Years of Department of Neurosurgery in Hacettepe (Hacettepe'de beyin cerrahisinin ilk 30 yılı). Ankara: Evren Ofset, 1989
3. Ege R: 50th Year of Ankara University Faculty of Medicine. Ankara: Ankara University Publications, 1996
4. Erbeni A: Dünyada ve ülkemizde nöroşirürjinin gelişimi. İçinde: Korfalı E, Zileli M (eds), Temel Nöroşirürji, Cilt I. Ankara: Türk Nöroşirürji Derneği Yayınları, 2005:3-32
5. Erbeni A: The first 30 years of department of neurosurgery in Hacettepe (Hacettepe'de beyin cerrahisinin ilk 30 yılı). Ankara: Evren Ofset, 1989:9-11
6. İnci S: A giant in Turkish neurosurgery: Prof. Dr. Aykut Erbeni (1929-2013). Turk Neurosurg 24:623-627, 2014
7. Naderi S, Egemen N: Nurhan Avman. Nöroşirürjiye Adanmış Bir Yaşam. İstanbul: Demir Tasarım, 2013
8. Naderi S, Erbeni A: History of neurosurgery and neurosurgical applications in Turkey. Surg Neurol 64 Suppl 2:S115-S122, 2005
9. Naderi S, Yuceer N: A short history of hydrocephaly in Turkey. Türk Nöroşir Derg 15:96-99, 2005 (in Turkish)
10. Pennsylvania Death Records. The Homewood Cemetery Pittsburgh. Available at: <http://www.interment.net/data/us/pa/allegheeny/the-homewood-cemetery/records-ti-tz.htm> Accessed Nov 27, 2022
11. Survey Committee, Congress of Neurological Surgeons: Directory of Neurological Surgeons in the United States, 1957
12. Turkmen V, Erbeni A: An infantile hemiplegia case presentation and hemispherectomy. Çocuk Sağlığı Hastalıkları Derg 3:135-139, 1960
13. Turkmen V, Erbeni A: The surgical treatment of hydrocephalus. Çocuk Sağlığı Hastalıkları Derg 2:161-167, 1959
14. Zeren K: EU Patented Doctors. Available at: <https://www.hurriyet.com.tr/gundem/ab-patentli-doktorlar-68081> Accessed Nov 27, 2022