

A Tribute to Henry H. Turner, MD (1892–1970)

A Pioneer Endocrinologist

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Henry H. Turner (1892–1970) was a pioneer endocrinologist, medical practitioner, and educator. He maintained a thriving private practice in Oklahoma City while at the same time serving on the faculty of the University of Oklahoma College of Medicine and its hospitals. In 1938, Dr. Turner published the manuscript describing the syndrome that bears his name.¹ It is the purpose of this communication to describe some of the details of Dr. Turner's life and career and the circumstances surrounding the identification of his original cases.

PERSONAL/FAMILY LIFE

Henry H. Turner was born August 28, 1892, in Harrisburg, Illinois. He was the only child of John William Turner and Alice Rose Turner. Dr. Turner grew up in Harrisburg and graduated from high school there in 1912. In 1923, on June 28, Henry Turner and Frances Bulkley were married. Two children were born of this union: Marian Frances born in 1925 and Alice Ann in 1929.² Dr. Turner was strongly civic-minded and was involved in many nonacademic endeavors. He was a Captain in the

Oklahoma National Guard (Marine Corp) from 1924–1927. He was a member of several social clubs, including the Doctor's Dining Club, Lotus Club, Touchdown Club, and the Tower Club. He was very active in the Oklahoma City Chamber of Commerce and sat on its Board of Directors for several years.

He had a passion for raising exotic orchids. This passion seems to have been fueled by a trip to South America as an invited speaker for the Endocrine Society. After that visit, shipments of orchids from South America came on a regular basis.

TRAINING (1914–1924)

Dr. Turner completed his premedical (undergraduate) work at St. Louis University from 1914 to 1918. In 1918, he served as a "pregraduate extern" at St. Johns Hospital in St. Louis under Dr. William Englebach. Dr. Englebach was one of the true fathers of the discipline of endocrinology and was one of the first presidents of the Endocrine Society. In an interview at the time of his retirement, Dr. Turner said that he had learned both radiology and endocrinology from Dr. Englebach. From this time on, he would have a keen interest in both of these areas.

He then entered the School of Medicine at St. Louis University and spent the first 2 years of medical school there. In 1921, he transferred to the University of Louisville and received the MD degree there in 1921.² His internship was served at the Louisville City Hospital where he was a house officer in medicine in 1921–1922. He

was appointed Chief Medical Resident at Louisville City Hospital and served in that capacity from 1922 through 1924. Although this seems to be a normal direction in training, it was, in fact, an unusual career choice for the time. To help pay for his training, he also held the appointment of resident roentgenologist at Louisville City Hospital. During these 2 years, he also participated in the metabolic ward as a "fellow" under Dr. John Walker Moore.² Dr. Moore was likewise a pioneer in the field of metabolic disorders.

RESEARCH AND PRACTICE OF MEDICINE (1924–CIRCA 1941)

Dr. and Mrs. Turner relocated to Oklahoma City in 1924, where he started his private practice and became affiliated with the University of Oklahoma College of Medicine and its hospitals. Dr. Turner was appointed Instructor in Medicine at the University of Oklahoma College of Medicine in 1924, and in October of that year as acting medical superintendent of University Hospital.³ In 1928, he was promoted to Assistant Professor of Medicine and served in that capacity from 1928 to 1939.

In 1930, the only neurologist at the University of Oklahoma died. To fill this void, Dr. Turner went to the University of Vienna for special (sabbatical) training in neurology and endocrinology during the period August through September 1930. From October through November 1930, he studied at the Hospital for Paralyzed and Epileptics at Queens Square, London.²

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As mentioned, in 1924, he was appointed Acting Medical Superintendent of the University Hospital in Oklahoma City; as part of these duties, he supervised 5 to 6 interns and several medical students. At the same time, he was appointed Consulting Endocrinologist for University Hospital. He served in this capacity and also as Chief of the Adult Metabolic Clinic at University Hospital from 1924 for several years.² During that entire period, Turner saw children with endocrine problems.

PROFESSORSHIP (1942–1969)

He was then appointed at the University of Oklahoma Clinical Professor of Medicine (1949–1966) and Clinical Professor Emeritus of Medicine from 1966 to 1970.²

In 1947, Dr. Turner was appointed Associate Dean of the faculty of the College of Medicine and served in that capacity through 1949.

Dr. Turner was active in a variety of professional organizations. He was the Chairman for Post-Graduate Medical Teaching for the Oklahoma State Medical Association from 1932–1943. In addition, he was the president of that organization from 1940–1941 (Fig. 1). He played many other prominent roles, notably in the Endocrine Society of America in which he served as vice president, secretary–treasurer, and in 1966–1967 as president. He belonged to the American Goiter Association, the Central Society for Clinical Research, and several local and regional medical organizations. He was a member of the board of directors of the Oklahoma Medical Research Foundation. He was president of the National Society for Nuclear Medicine. He was an honorary member of the Endocrine Societies of Columbia, Haiti, and Mexico.² Dr. Turner belonged to Alpha Kappa Kappa and Alpha Omega Alpha, the honorary fraternity for excellence in medicine.

In the latter half of his career, Dr. Turner became increasingly more involved in program development and the



FIGURE 1. Dr. Henry Turner, President, Oklahoma State Medical Association 1940–1941. Printed with permission from *The Journal of the Oklahoma State Medical Association*.⁵

administration of medical education. He was on the Executive Committee of the Oklahoma Medical Research Foundation and the Chairman of its Research Administrative Board from 1948–1954 (Fig. 2).

A review of Dr. Turner's curriculum vita at the time of his retirement showed over 30 publications. His major areas of published research included disorders of the anterior pituitary, androgen effects on testicular descent, and ovarian failure (hence, his discovery of Turner syndrome). A fascinating part of his vita discusses the relationship of the higher cortical functions of the brain and endocrine regulation (eg, "Epilepsy, Fatigue, and

Mental Illness as Influences on the Endocrine System"). Dr. Turner was clearly ahead of his time in considering the concept of "neuro-endocrinology"!

Dr. Turner received many honors. He was appointed Professor Extraordinaire at the National University of Mexico in 1944. He was made a member of the National College of Surgeons of Brazil in 1956. In 1959, he was made Schering Scholar in Endocrinology. He received the Certificate of Merit of the Endocrine Society in June 1961. Also in 1961, he received the Seal Harris Medal of the Southern Medical Association for contributions in clinical research.

RETIREMENT (1969–AUGUST 4, 1970)

Dr. Turner was a heavy smoker. Whenever you saw him in his office, he was almost always smoking a cigarette. Thus, it was not a great surprise when he developed pulmonary signs and was found to have carcinoma of the lung, which was the cause of his death in 1970. Dr. Turner died on August 4, 1970, from complications of his lung cancer.

DESCRIPTION OF THE ORIGINAL CASES OF TURNER SYNDROME

In June 1938, Dr. Turner read before the annual meeting of the Association for the Study of Internal Secretions in San Francisco his paper entitled “A Syndrome of Infantilism, Congenital Webbed Neck, and Cubitus Valgus.” He described 7 patients—6 adolescents and 1 adult. The paper was subsequently published in *Endocrinology*.¹

Following is an excerpt from an interview of Dr. Turner by Dr. R. Palmer Howard circa 1969.⁴ In this interview, Dr. Turner describes to Dr. Howard, in his own words, his thoughts about the syndrome that bears his name.

Dr. Howard: So that was going on. There was a medical clinic every day, 5 or 6 days a week. I suppose they even worked on Saturdays in those days, didn't they?

Dr. Turner: I don't recall.

Dr. Howard: I'll bet they worked Saturday mornings! You know, we are in a new age now.

Dr. Turner: I don't recall.

Dr. Howard: But then, Dr. Turner, I think that this is a good time to ask you a little bit about the early successes of the Endocrine Clinic. You had thyroid diseases—did you—diabetes, no? Was there another diabetic clinic?

Dr. Turner: No. The diabetes was in there too, in the same clinic.

Dr. Howard: So you did have diabetes in there; and obesity and adrenal difficulties. Of course, this was before



FIGURE 2. Dr. Henry Turner at a reception for the Oklahoma Medical Research Foundation shortly before his death.

cortisone and really before adrenal cortical extract. I think that was '36, Hartman and so on, about '35 or '36, within a year or so.

Dr. Turner: I don't believe that adrenal hyperplasia was even thought of. It might have been, but certainly not as we know it today.

Dr. Howard: No, but you were looking for pituitary disease.

Dr. Turner: Yes, starting along, we knew that.

Dr. Howard: Cushing's and Simmonds' diseases had been described.

Dr. Turner: Yes.

Dr. Howard: When did you find that you not only could recognize some of the classic endocrine diseases which you had mentioned Dr. Englebach and

Dr. Moore and you reading, but when did you find that maybe you could make some original contributions yourself, Dr. Turner? I am referring to the one that you described so well from Oklahoma City?

Dr. Turner: Well, during this, at the endocrine clinic and in private practice, I had seen a few young girls who had not matured, and they were short in stature and they had short necks with a low hair line and increased carrying angle at the elbow. And I became intrigued with them and I was wondering what in the world could do this to them. And finally I had seen patients who on x-raying neck they did not show any absence of the cervical vertebra or any fusion of it like you find in Klippel-Feil

Syndrome. They all followed a definite pattern. They were all, as I say, short in stature and had no breast development and no internal organs that we could find except perhaps with an endoscope. We could see a little nipple that might have been a cervix less than one cm. in size, and...

Dr. Howard: Of course, the vagina was present?

Dr. Turner: Yes, but we could not palpate any ovaries whatsoever. They had only a small tufting, a few pubic hairs. And finally I just reported it with the hope that these 7 patients, I believe it was,—I believe I reported them in 1937. Then immediately, of course, others found a high FSH, follicle stimulating hormone, in the urine. I believe that was Varney, wasn't it?

Dr. Howard: Could well have been; that is one of the early names.

Dr. Turner: Yes, Varney and—well—Allen Kenyon.

Dr. Howard: Kenyon. Those were early endocrinologists.

Dr. Turner: Then, weren't you with Albright, then—or later?

Dr. Howard: I wasn't one of the first ones with Albright. Albright became interested in that syndrome with Smith, Patricia Smith, and Reifenstein before I joined them. But, of course, Albright was very interested in what we called Turner's Syndrome, or gonadal agenesis, to try to get a pathologic type of a name, and so was J. S. L. Browne in Montreal. Two of the people who taught me in the period from '45 to '47 thought this was one of the most fascinating endocrine diseases of all. And as you recollect, we differentiated it from hypopituitary eunuchoidism in girls. So you brought this syndrome to the attention of the endocrinologists and of the world and then you've been participating in the further unfolding of it these number of years. But, some of your original patients are still alive aren't they?

Dr. Turner: Oh, yes. It has been a pleasure to follow some of them. I think the majority of the original 7—at least, I recall 4 of them are still living. Of

course the fact that they responded to estrogen therapy which will develop their breasts and increase the size of the uterus and develop feminine curves and really feminize them right up to the point where they can get married and lead a normal life as a female.

Dr. Howard: They may adopt children.

Dr. Turner: With the exception, of course, they cannot have children.

Dr. Howard: Still they can be partners in marriage and success; fully bring up the children. They can rear them. Well, Dr. Turner, remind me again—in your original paper, I remember so well the pictures and descriptions of the disease, but you did mention improvement with estrogen therapy?

Dr. Turner: Yes.

Dr. Howard: So, you not only described it but really gave us the practical treatment of it right off. I am sure that we have had—of course, you have many contributions and published about it for many years since. You have been called to describe it in Societies throughout the world and I am going to come to that again. But you were already a member of the Endocrine Society before you described this. You had joined the Endocrine Society?

Dr. Turner: Oh, yes.

Dr. Howard: When did you first join it: Do you remember—after you were in Oklahoma City apparently, a few years?

Dr. Turner: I think it was before then.

Dr. Howard: Around '23 or '24 then. When did you first become an officer in the Endocrine Society? How long have you been Secretary?

Dr. Turner: Oh, I was on the council for some time before I was elected Secretary-Treasurer. I believe, I was made Secretary-Treasurer in 1942.

Dr. Howard: That would be a few years after you described Turner's Syndrome; and then you were Secretary-Treasurer up until last year.

Dr. Turner: Yes, approximately twenty-five years.

Dr. Howard: And then you were kicked upstairs to be President-Elect.

Dr. Turner: Yes (laughter).

Dr. Howard: That is grand; and this coming June is your time for presidential address, is it not? Well, Dr. Turner, carrying on with the Endocrine Society and you as a physician, a recognized physician of Oklahoma City and endocrinologist and officer of the Endocrine Society because of your contributions and great interest, I know very well how much time you have put into the duties with the Endocrine Society that must have been, I'd say, a quarter-time job or half-time job in itself, wouldn't you?

Dr. Turner: In the early days, of course, I had no assistants. In fact, 4 or 5 years now we have had a full time executive secretary with an assistant, which reduced the load. Of course the membership, I think we had 300 members when I first became Secretary, now we have over 1700.

In 1989, one of us (GBS) was talking to a pediatric endocrinologist in private practice in the southern part Oklahoma City. This physician had done his pediatric endocrinology training with Dr. Turner. During the course of this conversation, he remembered that Dr. Turner had given him "a few boxes of stuff that were out in his barn." We went out and found the boxes. On opening them, I was amazed at their contents. In these boxes were the original pictures from Dr. Turner's publication on Turner syndrome. In addition, there were dozens of other photos, including additional patients with Turner syndrome that were not in the first report. The box also contained photos of dozens of other patients with a variety of endocrine disorders, including male hypogonadism, hypothyroidism, hypopituitarism, Cushing/Addison disease, "polyglandular disease," hyperparathyroidism, and "staticus hypoplasticus"! These original photos have been donated for long-term preservation to the Endocrine Society of America. Figures 3 to 5 are photographic reproductions of these original displays.

HENRY H. TURNER: A PERSONAL ACCOUNT

One of us (HDR) knew Dr. Turner well and enjoyed a cordial relationship with him. It is pertinent to recount some of the details of this:

I (HDR, Jr.) went to Oklahoma City in 1958 as Professor and Chairman of the Department of Pediatrics and Pediatrician-in-Chief of the Children's Memorial Hospital. The Department at that time had 1 full-time faculty member who had tendered his resignation but had agreed to stay on until the new chairman was appointed. Thus, only 2 residents and I were present to run a busy clinical service and a major department in the medical school. After I had accepted the position but before assuming it, I had of course given thought to how I wanted to build the Department. I felt that in keeping with modern times, it was pertinent to build the Department by creation of specialty programs. Actually, formal legal divisions were never established because of the administrative and fiscal regulations. However, the Department functioned on a "division" basis. A position that I wanted to identify and 1 of the programs I wanted to build was pediatric endocrinology and metabolism. I had begun recruiting for this position before I arrived in Oklahoma City. However, as noted previously, Dr. Henry Turner had been appointed endocrinologist to the University in 1924. He continued to conduct an active endocrine clinic attended by both adults and children. As pointed out also, Dr. Turner was a busy practitioner who gave of his time to run the endocrine program and, when it was finished in 1928, the Children's Hospital. However, most of the patients, including the children, were seen at the Adult University Hospital.

I thus made an appointment to meet Dr. Turner and to raise the knotty problem of developing a Pediatric Endocrine and Metabolism Clinic at the Children's Memorial Hospital. My plan was to transfer children from the exist-

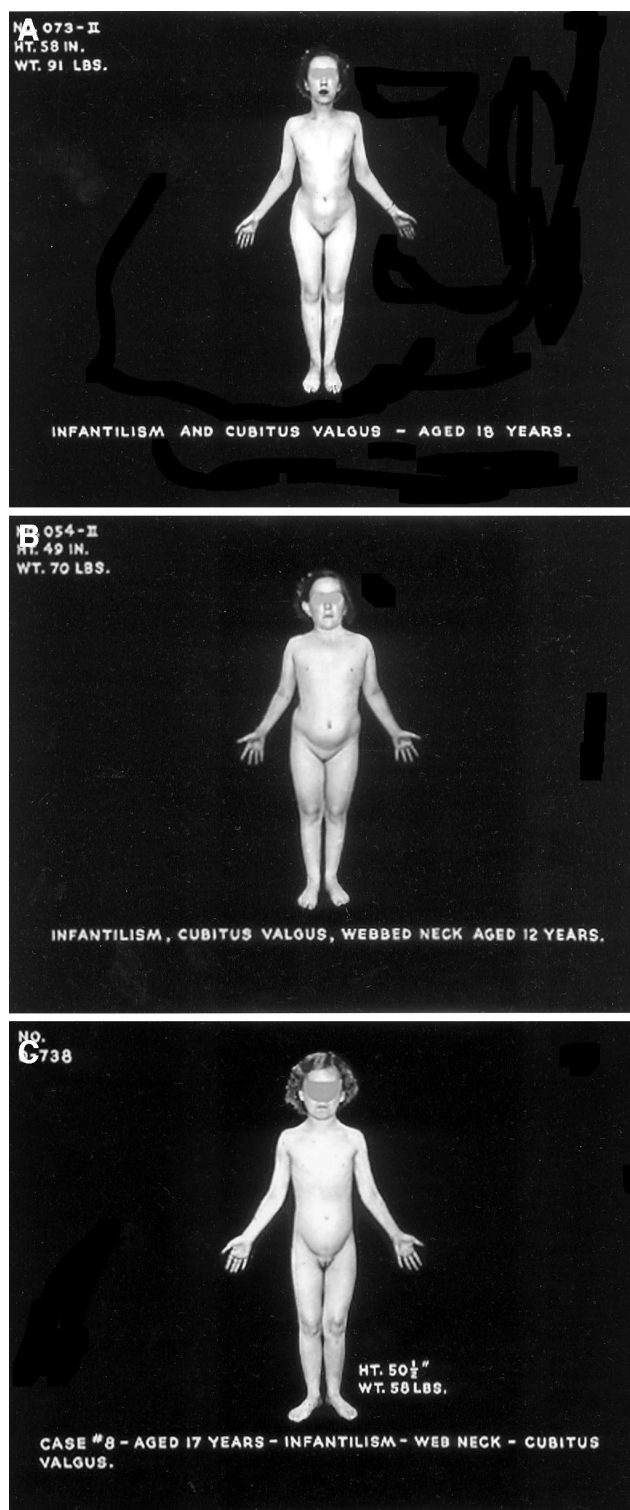


FIGURE 3. (A–C) These duplications were made from original figure plates made by Dr. Turner for his publication describing Turner syndrome. These plates were handmade by taking photographs, manually cutting out the pictures, and then mounting them on a black cardboard background. The lettering was all done by hand with a white pen by Dr. Turner. The originals now reside in the archives of the Endocrine Society of America.

ing endocrine clinic to the newly established pediatric endocrine clinic at the Children's Hospital.

I must admit that I made the appointment to see Dr. Turner with some trepidation. Dr. Turner was a distinguished physician and was widely known in endocrine circles. He was also said to have a short temper and would not tolerate inactivity or sloth. I went to Dr. Turner's office in the Doctor's Building in downtown Oklahoma City. His secretary was very cordial and asked me to take a seat while I was waiting to see Dr. Turner. He did not keep me waiting very long. I introduced myself and told him why I was there. More specifically, I discussed with him the plans for the development of the Department of Pediatrics, including the program in pediatric endocrinology and metabolism. I pointed out to him that I planned to recruit a full-time faculty member in pediatric endocrinology and metabolism and that I wanted to have the clinic for children in the clinics of the Children's Memorial Hospital. Dr. Turner listened carefully, asked an occasional question and, without any prompting on my part, stated that he understood completely what I wanted to do and he agreed with me. He also stated that he would be willing to transfer all of the children and adolescents now being seen in the clinic at the University Hospital to Children's Hospital. Thus, it was with great relief that I received his blessing so to speak.

From that time on, we were good friends. I was subsequently invited to his home and had an opportunity to meet Mrs. Turner, a charming lady. After recruiting the pediatric endocrinology and metabolism pediatrician, I made sure that he met Dr. Turner and stayed in close contact with Dr. Turner.

Dr. Turner, because of his seniority and reputation, continued to receive, but in a decreasing fashion, referrals of children with endocrine or possible endocrine disorders. He very generously would call me about such patients and

then refer the patients to Children's Hospital. Of course, I turned such patients over to the physicians in pediatric endocrinology and metabolism to arrange the appointment, to inform Dr. Turner of the appointment, and later details of the evaluation and conclusion of the case.

Dr. Turner and I developed a solid friendship. At meetings of the Oklahoma State Medical Association or the Oklahoma City Medical Society, I always made a point of speaking to him. He always received me graciously and made a point of introducing me to physicians that I did not know.

One day, and I do not remember the exact month or year, I received a phone call from Dr. Turner and he said he would like to visit with me. We made arrangements to have lunch together. He told me that he was planning to retire from active practice soon. He further stated that he would like to give me the original photographs of the patients described in the first article defining Turner syndrome. I told him, of course, I was honored and pleased that he would do this and I promised to take good care of the original material. In addition, the slides of the old-fashioned lantern-type, there were notes on his first case and follow up of the patient. These were turned over to the physicians in the Pediatric Endocrine and Metabolism program at Children's Hospital of Oklahoma.

CONCLUSION

In reviewing the events of Dr. Turner's life, one comes away amazed at many aspects of his life. Clearly, he was a brilliant man with a keen eye for observation. He was a man of apparently endless energy and enthusiasm. His involvement with the early stages of endocrinology was truly pioneering, and his training and collaborations are filled with the names of the true pioneers of the field. Probably most important was his commitment to academic endeavors. This is particularly notable given the reality of early academic medicine—the constraints of private practice conflicting with academic pursuits. He was a

teacher, a community leader, and a political strategist. One striking lesson to be learned is that the more things change, the more they tend to stay the same. The reader is referred to the quote below taken from Dr. Turner's 1941 OSMA Presidential Address.⁵ In his concluding remarks, one can still see the reality of today's practice of medicine.

"Perhaps devotion to scientific improvement and technical effectiveness is responsible for failure to keep the public fully aware of the achievements and standards of American medicine. The future of medicine will be determined by the intelligence and vigor with which we combat this widespread propaganda. We have been called poor businessmen and impractical idealists, an accusation with a great deal of justification.

It is more important now than ever before that physicians participate in public activities and cooperate in the promotion of projects, which seem to have community value. We must function as citizens to expect consideration from the lawmakers. We must have more than a superficial knowledge of the machinery of government. It is imperative that we demand from all legislators—senators and congressmen—our local representatives—their views on health legislation. If we are to survive, we must alter the viewpoint of the patient by familiarizing the public with the facts or truths. Let each and every one of us assume the responsibility of preserving the independence of American medicine."

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