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Results: Today, physicians use urine to diagnose selected conditions, but from ancient times until the 19th century, urine was used as the primary diagnostic tool. Laboratory medicine began with the analysis of human urine, which was called uroscopy and today is termed urinalysis. Uroscopy is derived from the Greek 'ouron' meaning 'urine' and 'skopeo' meaning to 'examine'. Inspection of urine was recorded on clay tablets of Sumerian and Babylonian physicians of 4000 BC and was confirmed by Hippocrates and Galen Meanwhile, uroscopy became a tool in the hands of uneducated people for fortune telling, to the point that Brian published the book titled "The Piss Prophet", a book against abuses of uroscopy. In Middle Ages, urine as the first bodily fluid to be examined, was explained in detail by two scholars Rhazes and Avicenna that provided medicine with a large body of information about the functions of kidneys and other organs. Gilles de Corbeil, Canon of Paris and Physician to King Philippe Auguste of France, wrote treatise in Uroscopy in Verse. From 1327 to 1647 urine was speculated in works of many physicians in poems. It was described in Padua and Venice as a complex procedure in which a special flask, matula had to be used. Matula had parts which corresponded to parts of a human body. Urine was divided into 20 kinds and further subdivided according to color, smell, taste, image and sediment which led to diagnosis. Ketham published Ketham’s Fasciculus Medicinae in 1491 and it was the most reliable source of the time. It contained 21 thin-necked urine filled flasks (matula). It showed 4 small circles, which represented sanguinous, choleric, phlegmatic and melancholic and before the invention of Larinee’s stethoscope and Hooke’s microscope. It was more highly valued than the pulse. There are many approaches to analyzing urine. One of them was Thurneiser who claimed that urine carried all the information of the body. He used “anatomical furnace” to boil the urine and determine where the illness was. In 1684 Leewenhook published the first drawings of bacteria as seen under the microscope Foundation for dipstick testing was laid by Boyle in 1670. It was Helmont at the end of the 17th century who first suggested the quantitative chemical analysis of urine. Bright was the early proponent of routine practice of urinalysis. Next came dipstick testing for glucose in 1850 described by Mauments. The first popular test

Conclusions: Despite modern medicine of the 21st century, urine analysis still remains as valid as it used to.

Abstracts

Historical Progress of Urine Examination from Uroscopy to Urinalysis

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Introduction and Aims: This article reviews a few of the major historic aspects of urine examination from ancient times to the 21st century.

Methods: Review of published literature on uroscopy and urinalysis from past to the present.

Results: Today, physicians use urine to diagnose selected conditions, but from ancient times until the 19th century, urine was used as the primary diagnostic tool. Laboratory medicine began with the analysis of human urine, which was called uroscopy and today is termed urinalysis. Uroscopy is derived from the Greek 'ouron' meaning 'urine' and 'skopeo' meaning to 'examine'. Inspection of urine was recorded on clay tablets of Sumerian and Babylonian physicians of 4000 BC and was confirmed by Hippocrates and Galen Meanwhile, uroscopy became a tool in the hands of uneducated people for fortune telling, to the point that Brian published the book titled "The Piss Prophet", a book against abuses of uroscopy. In Middle Ages, urine as the first bodily fluid to be examined, was explained in detail by two scholars Rhazes and Avicenna that provided medicine with a large body of information about the functions of kidneys and other organs. Gilles de Corbeil, Canon of Paris and Physician to King Philippe Auguste of France, wrote treatise in Uroscopy in Verse. From 1327 to 1647 urine was speculated in works of many physicians in poems. It was described in Padua and Venice as a complex procedure in which a special flask, matula had to be used. Matula had parts which corresponded to parts of a human body. Urine was divided into 20 kinds and further subdivided according to color, smell, taste, image and sediment which led to diagnosis. Ketham published Ketham’s Fasciculus Medicinae in 1491 and it was the most reliable source of the time. It contained 21 thin-necked urine filled flasks (matula). It showed 4 small circles, which represented sanguinous, choleric, phlegm, matic and melancholic and before the invention of Lartnee’s stethoscope and Hooke’s microscope. It was more highly valued than the pulse. There are many approaches to analyzing urine. One of them was Thurneiser who claimed that urine carried all the information of the body. He used “anatomical furnace” to boil the urine and determine where the illness was. In 1684 Leewenhook published the first drawings of bacteria as seen under the microscope Foundation for dipstick testing was laid by Boyle in 1670. It was Helmont at the end of the 17th century who first suggested the quantitative chemical analysis of urine. Bright was the early proponent of routine practice of urinalysis. Next came dipstick testing for glucose in 1850 described by Mauments. The first popular test