39 Historical development of diagnosis and treatment of bladder cancer

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INTRODUCTION & OBJECTIVES: Hippocrates (460-370BC) called benign tumours 'oncos', swelling in Greek and malignant tumours 'carcinos' from crab. The roman historian Celsus (25BC-AD50) translated carcinos into Latin as 'cancer'. Tumours of skin, breast and other organs were described by the ancients, however bladder tumours were considered as a rare incidental finding during the lithotomy procedure for removal of stones. Haematuria and pus in the urine were referred to throughout the middle ages and caruncles could refer to prostatic hyperplasia. The Lithotomists Fabricus Hildanus (1560-1624) described the unintentional removal of bladder tumour during lithotomy procedure. Joseph Covillard of Lyons reported, in 1639, a planned surgical removal of bladder tumour by means of forceps through the perineal incision which was standard route to the bladder. Several other reports of bladder tumour removal were followed, however it was only by the 19th century that bladder tumours were recognised and properly differentiated as separate entity from tumours of the prostate. Francois Chopart of Paris in 1830 published his work on post mortem studies and findings to differentiate between different types of bladder tumours. He used the word "Fungus" for papillary tumours to differentiate them from sessile invasive growths. Henry Thompson of London in 1868 wrote that diagnosis can be achieved by "digital exploration of the bladder'' through a perineal urethrotomy and treatment in all cases was palliative as these were beyond the power of art to remove. In 1874 Bilroth of Vienna performed the first suprapubic removal of a large bladder tumour which was impossible to remove through a lateral lithotomy incision. The suprapubic approach was also advocated by others and became the accepted method to replace the lateral lithotomy approach which was discarded soon afterward. Partial cystectomy was performed by Sonnenburg in 1884 for treatment of bladder tumour. Max Nitze of Berlin in 1877, produced the first cystoscope which marked the beginning of the modern urology. In 1889, Nitze published a study on cystoscopic diagnosis of bladder tumours and the procedure was generally adopted. Advances in diagnosis and anesthesia allowed total cystectomy to be performed, the first was in 1884 by Bardenheur of Cologne. Urinary diversion and its complications remained a major obstacle until Eugene Bricker introduced the ileal conduit in 1950. The X-Ray was discovered by Roentgen in 1895 and was later extensively used in the diagnosis and management of bladder tumours. The first bladder tumour staging was proposed by Jewett & Strong 1946 based on the depth of tumour invasion. Intravesical chemotherapy was started in the 1960s with Silver nitrate and podophyllin before thiotepa was used 1961. Morales in 1976 reported the first clinical use of intravesical BCG for treatment of superficial bladder tumours.

CONCLUSIONS: The diagnosis and treatment of bladder tumours took very long time to develop to it's present form. The process naturally was governed by the progress made in other medical fields such as the development of the histopathology, anaesthesia, antibiotics and above all the progress made in the cystoresectoscope and imaging techniques. Surgical treatment of this disease up until recently was of high risk associated with high morbidity and mortality.