

Comparative Study of Outcome of Patients with Wilms Tumor Treated with Upfront Chemotherapy and Upfront Surgery in Alexandria University Hospitals

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Abstract : Introduction: Wilm's tumor is the most common malignant renal tumor in children. Much progress has been made in the management of patients with this malignancy over the last 3 decades. Today treatments are based on several trials and studies conducted by the International Society of Pediatric Oncology (SIOP) in Europe and National Wilm's Tumor Study Group (NWTs) in the USA. It is necessary for us to understand why do we follow either of the protocols, NWTs which follows the upfront surgery principle or the SIOP which follows the upfront chemotherapy principle in all stages of the disease. Objective: The aim of is to assess outcome in patients treated with preoperative chemotherapy and patients treated with upfront surgery to compare their effect on overall survival. Study design: to decide which protocol to follow, study was carried out on records for patients aged 1 day to 18 years old suffering from Wilm's tumor who were admitted to Alexandria University Hospital, pediatric oncology, pediatric urology and pediatric surgery departments, with a retrospective survey records from 2010 to 2015, Design and editing of the transfer sheet with a (PRISMA flow study) Preferred Reporting Items for Systematic Reviews and Meta-Analyses. Data were fed to the computer and analyzed using IBM SPSS software package version 20.0. (11) Qualitative data were described using number and percent. Quantitative data were described using Range (minimum and maximum), mean, standard deviation and median. Comparison between different groups regarding categorical variables was tested using Chi-square test. When more than 20% of the cells have expected count less than 5, correction for chi-square was conducted using Fisher's Exact test or Monte Carlo correction. The distributions of quantitative variables were tested for normality using Kolmogorov-Smirnov test, Shapiro-Wilk test, and D'Agostino test, if it reveals normal data distribution, parametric tests were applied. If the data were abnormally distributed, non-parametric tests were used. For normally distributed data, a comparison between two independent populations was done using independent t-test. For abnormally distributed data, comparison between two independent populations was done using Mann-Whitney test. Significance of the obtained results was judged at the 5% level. Results: A significantly statistical difference was observed for survival between the two studied groups favoring the upfront chemotherapy(86.4%)as compared to the upfront surgery group (59.3%) where $P=0.009$. As regard complication, 20 cases (74.1%) out of 27 were complicated in the group of patients treated with upfront surgery. Meanwhile, 30 cases (68.2%) out of 44 had complications in patients treated with upfront chemotherapy. Also, the incidence of intraoperative complication (rupture) was less in upfront chemotherapy group as compared to upfront surgery group. Conclusion: Upfront chemotherapy has superiority over upfront surgery.As the patient who started with upfront chemotherapy shown, higher survival rate, less percent in complication, less percent needed for radiotherapy, and less rate in recurrence.

Keywords : Wilm's tumor, renal tumor, chemotherapy, surgery

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