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Commentary

Commentary: Disseminated Adult Wilms Tumour in Pregnancy- Leveraging Multidisciplinary Care in a Low Resource Setting

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Adult Wilms tumor is a rare occurrence with limited examples cited in literature. It is predominantly a childhood tumor occurring between the average ages of 2 to 3 years but can occur up to age 8 years and for unknown reasons it affects more African children than Caucasians [1,2]. Its presence in adults therefore, is uncommon and may result in missed or delayed diagnosis. The diagnosis when concurrent in pregnancy may even be more challenging as the presentation may mimic other pregnancy related conditions.

It typically presents as hematuria, weight loss, flank pain and an abdominal mass which may be masked by a growing gravid uterus [3]. In a case report "Disseminated Adult Wilms tumor in pregnancy- leveraging multidisciplinary care in low resource settings", the authors describe a 23 year old African woman with Wilms tumor concurrent with a wanted pregnancy who had Nephrectomy after a delay in diagnosis followed by antenatal chemotherapy [4]. The delay in diagnosis arose from a failure of the patient to seek early medical care as well as failure of the primary caregivers to recognize the initial clinical features of the tumor and to refer appropriately for diagnostic work up and further management after she presented to them. This may be typical in low resource settings due to poor socioeconomic factors and high illiteracy rate [1,5,6]. This however, can be mitigated by improvement of the general socioeconomic status of citizenry, improved coverage or universality of national health insurance schemes and improved literacy especially through health education drives [1,5,6]. Public health officials can organize programs to educate the populace about such cancers and their clinical features and the need for them to present early for clinical care. Additionally, even though a rare disease, health care professionals especially those at primary health care centers need to be empowered through continuous professional development trainings to recognize and appropriately work up and refer early, such conditions.

Decision for follow-up post-operative chemo-radiation was hampered in the case presented by failure to diagnose pregnancy early. For women of reproductive age, undergoing major surgeries, it's imperative for pregnancy to be ruled out through interrogation of the history of the last menstrual period and a pregnancy test if suspected. Immediate post-operative nausea and vomiting may not always be associated with the surgery or antibiotics. Various differentials including pregnancy need to be suspected and ruled out based on the history and examination findings. It's commendable that the authors in this case report suspected pregnancy as a differential for this patient's immediate post-operative nausea and vomiting and investigated her for pregnancy [4].

Respect for patient informed choice of management irrespective of implications on outcome highlights the ethical dilemmas faced in a situation of a wanted pregnancy in the setting of a treatable tumor whose prognosis will worsen on delay of life saving chemotherapy [7]. Multidisciplinary team management that includes a high risk pregnancy specialist (maternal-fetal medicine specialist), pediatric and adult oncologist, neonatologist, nephrologist, anesthesiologist, clinical psychologist, pediatric endocrinologist and a fertility specialist are needed to negotiate through these ethical conflicts [8,9]. In low resource countries, this is even more imperative as they may need to pool available resources and knowledge on current evidence-based treatment modalities to formulate the best treatment pathway for such patients [4].

Urologist review is appropriate for Wilms tumor with need for radical nephrectomy of the affected kidney followed by adjuvant chemo radiation. Subsequently there is need for follow up with imaging studies for tumor recurrence and dissemination. In this case, this could not be done as the patient defaulted follow up and only came back with advanced pregnancy and disseminated disease. Opportunity for adjuvant chemotherapy towards possible cure was thus missed. The patient's pregnancy was a high-risk pregnancy due the concurrence of a tumor needing chemo radiation [4]. The chemotherapeutic management holds potential impact on fetal anatomy, growth and well-being needing fetal anomaly scanning, serial growth scans, amniotic fluid volume measurements, fetal Doppler's, antenatal corticosteroids, magnesium sulphate for neuro protection all of which were done for this case under the management of the maternal fetal medicine specialists [4]. The adult oncologist in consultation with a pediatric oncologist who is an expert in managing such cases should formulate a chemotherapeutic regimen that is individualized,

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equally effective and yet minimally toxic to the baby. The choice of vincristine, dactinomycin and adriamycin were all appropriate for this patient.

Before the commencement of chemoradiation in such women of reproductive age, a fertility specialist is needed to discuss the impact of the treatment on maternal gonadal function and discuss fertility options. Unfortunately, due to low resources, cryopreservation of her eggs and follow up could not be done.

Decision on timing of delivery needed to be made with the input of the neonatologist. This was done with the baby being received at delivery by the neonatologist and admitted to the neonatal intensive care unit. Baby was examined for any anomalies which were absent. Feeding options were also discussed with the patient and due to the potential expression of chemotherapeutic agents in breast milk, formula feeds were opted for in this case which was appropriate. The Pediatric endocrinologist also was needed to test for any impact of the antenatal chemotherapy on the gonads of the fetus. This was indicated in the follow up plan for this baby. The mode of delivery for this patient was via Elective caesarean section on maternal request. Despite this choice, once there is no obstetric contraindication for vaginal delivery, induction of labor can be opted for.

The patient was roped immediately post-delivery into the full chemo radiation management protocol. Clinical psychologists were on hand throughout management to offer support. This is key to aid compliance to treatment and also help the new mother cope with the vagaries of caring for a new baby as well us undergoing chemotherapy. Social support from family and friends may further enhance the mother's coping mechanisms. Long term follow-up for both mother and baby are also essential. The baby is at risk of developing Wilms tumor and hence will require surveillance [10].

In conclusion, this case report has raised several dilemmas whose decisions have had direct import for outcomes. Within limited resources, this patient was successfully managed in a high-risk pregnancy setting by MDT care led by the maternal fetal specialist. This underscores the fact that, when complex cases are managed by a coordinated team of various specialists' even limited resources can be leveraged for good outcomes.

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