Abstract #314; Immune Check Point Inhibitors (ICIs) in Cancer Therapy: An Experience from the Resource Poor and Developing Country.

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Background: After pioneering work on anti-tumor immunity by Nobel laureates on anti -tumor immunity and Immune Check Point Inhibitors (ICIs) the spectrum of immunotherapeutic options has increased beyond Melanoma/Renal cell carcinoma. There is a paucity of data on Indian experience and hence we evaluated the efficacy of Immune Checkpoint Inhibitors at our institute. **Methods:** All the patients with advanced solid cancers, who are receiving ICIs after the failure of chemotherapy at our institute, were retrospectively assessed. Patient characteristics, Clinical Benefit Rate (CBR), and Progression free survival (PFS) were calculated. Response assessment was done after 3 cycles using imRECIST (Immune-modified Response Criteria in Solid Tumours). Therapy was continued until progression or unacceptable toxicity. **Results:** A total of 28 patients met the inclusion criteria and 19 were eligible for the evaluation. Head & Neck cancer (37%) was the most common malignancy followed by Lung carcinoma (28%). Other malignancies included were Ca Oesophagus, HCC, RCC, Ca Bladder, Mesothelioma, Colon, Penis & IHCC. Majority received ICI as 2nd line therapy (47%). Nivolumab, Pembrolizumab, and Atezolizumab were used in 22, 4, and 2 patients respectively. Heavily pre-treated patients who were started on ICI as 5th line therapy had a CBR of 75% f/b 15% & 44% in 3rd and 4thline treated patients.CBR was seen is 31.5% of patients. Two patients have had maximum CBR. Grade 3 adverse events (IRAE) were seen in 3 patients (11.5%) who responded to prednisolone. With a maximum follow-up of a period of 9.6 months, the PFS is 4.5 months. **Conclusions:** ICIs are a new armamentarium in cancer treatment. Major drawback of ICI in our country is the high cost which makes its usage in a clinical setting a practical challenge. Response rate is less (14-40%) in international studies and one can have a sustainable response. A comparable CBR (31.5%) was seen in our study with two patients having a durable response. As ICIs are not immune to adverse events and with good clinical judgement, we can detect them with a high index of suspicion. We should be cautious and intelligent enough to detect IRAEs with high index of suspicion and pre-therapy work up as early as possible and we should report the same. Major drawback of usage of ICI in our country is the high cost of the drug which makes its implementation and usage in the clinical setting a practical challenge.

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