Format: Abstract

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Efficacy and tolerability of two scalp cooling systems for the prevention of alopecia associated with docetaxel treatment.

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Abstract

PURPOSE: Chemotherapy-induced alopecia is very distressing for a patient and may have an impact on treatment decisions. On docetaxel-based therapy, alopecia occurs in a substantial proportion of patients. We aimed to investigate whether two different methods of scalp cooling can prevent hair loss.

METHODS: In this open-label, prospective, nonrandomized trial, patients with solid tumors receiving docetaxel in a palliative setting were allocated according to patients' preference to short-term cooling (over 45 min postinfusion) with a Paxman PSC-2 machine (PAX), with cold cap (CC), or no cooling. The combined endpoint was alopecia World Health Organisation (WHO) III or IV or the necessity to wear a wig. Study identifier is Clinicaltrials.gov NCT01008774.

RESULTS: Two hundred thirty-eight patients were included in the trial (128 patients PAX, 71 CC, and 39 no cooling). Number of cycles (median 4) and median docetaxel doses were similar across groups (55-60 mg/day on weekly therapy, 135-140 mg/day on 3-weekly therapy). Alopecia occurred with PAX, CC, and no cooling under 3-weekly docetaxel in 23, 27, and 74% and under weekly docetaxel in 7, 8, and 17%, respectively. Overall, cooling (PAX and CC combined) reduced risk of alopecia by 78% (hazard ratio 0.22; 95% confidence interval 0.12 to 0.41). CC and PAX prophylaxis led to the same degree of prevention of alopecia. Adverse events (AE) were reported in 5% (most frequently, sensation of cold), and 30 patients (13%) discontinued cooling measures after cycle 1.

CONCLUSIONS: In this first comparison published to date, both PAX and CC offer efficacious protection against hair loss, in particular when docetaxel is administered in a 3-weekly interval.

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