Pain during High-Dose-Rate Brachytherapie for Cervical Cancer: A Survey into Pain Location, Magnitude and Impact on Psychological Distress

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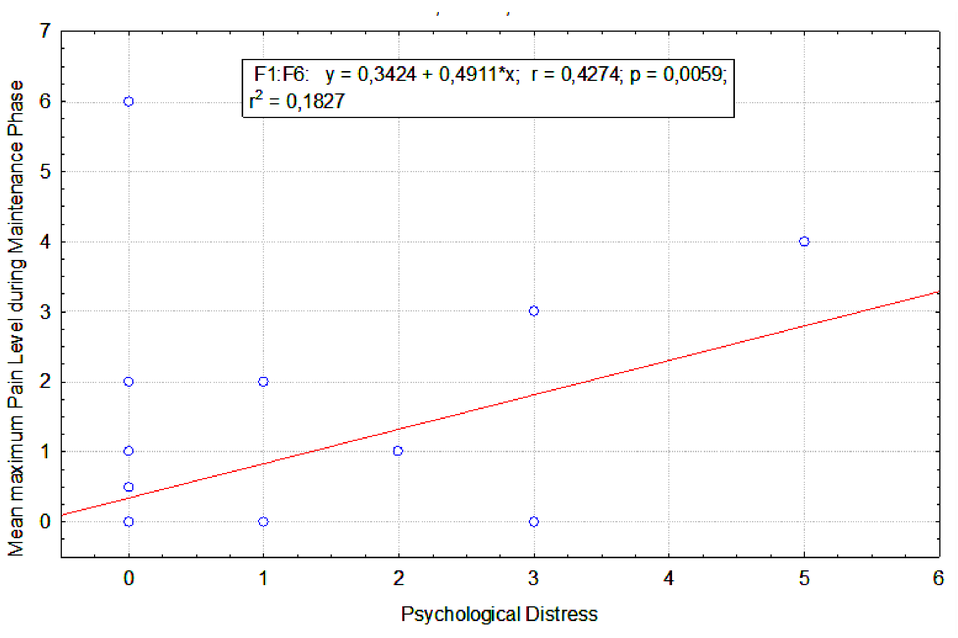
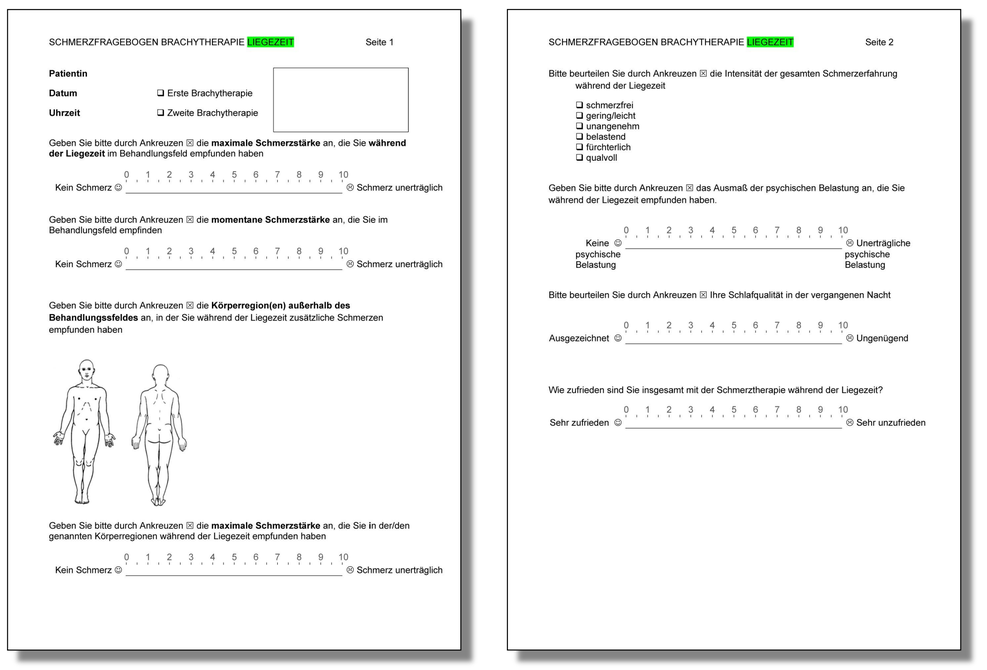
INTRODUCTION/AIM:
High-Dose-Rate (HDR) brachytherapie, for locally advanced cervical cancer with two fractions in one application under spinal and epidural anaesthesia, is effective. However, it is associated with a high incidence of posttraumatic stress disorder (PTSD), which may be linked to pain experienced during the maintenance of the applicator[1]. The aim of this observational, descriptive study was to determine pain location and magnitude during the maintenance phase of HDR brachytherapy and to investigate a possible correlation between pain magnitude and perceived psychological distress.

MATERIALS and METHODS:
Placing of the applicator was performed under spinal/epidural anesthesia and i.v. sedation (propofol). Pain therapy during applicator maintenance was performed by epidural anesthesia (Ropivacain 0.2%, 6-8ml boli/h) as well as i.v. analgosedation (600 mg Tramadol, 4g Metamizol, 2,5mg DHB per die as well as Temesta (1-2 mg boli as needed up to 3/d).
The maintenance phase lasted a maximum of 48h.
Patients were asked to complete a pain questionnaire the day after completion of brachytherapy.
The questionnaire included the following items:
1) Maximum pain in the applicator area during therapy (VAS 0-10)
2) Momentary pain in applicator area at time of completion of questionnaire
3) Occurrence of pain in anatomical areas other than the applicator area during maintenance phase
4) Maximum pain in anatomical areas other than the applicator area during maintenance phase (VAS 0-10)
5) Psychological distress experienced during maintenance phase (Scale 0-10)

RESULTS:
40 patients completed the questionnaire. 29 patients (73%) experienced no pain during maintenance phase. The mean maximum pain level experienced during maintenance was VAS 0.6 (Range 0-5).
The mean momentary pain level at the time of questionnaire completion was VAS 0.3 (Range 0-5).
Pain in anatomical areas other than the treatment area occurred in 6 patients (15%).
1 patient experienced pain in her head, 1 in her thigh and 4 patients in their upper back.
The mean pain level experienced in anatomical areas other than that of treatment was VAS 0.6 (0-0.7).
28 patients felt no psychological distress during maintenance phase (0 on 0-10 scale)
The mean psychological distress during maintenance phase was 0.6 (Range 0-6).
Correlation between maximum pain level and psychological distress was statistically significant but not strong (r=0.4, p=0.006)





SCHMERZFRAGEBOGEN BRACHYTHERAPIE LIEGEZEIT Seite 1

Patientin
Datum ❑ Erste Brachytherapie
Uhrzeit ❑ Zweite Brachytherapie

Geben Sie bitte durch Ankreuzen ☒ die **maximale Schmerzstärke** an, die Sie **während der Liegezeit** im Behandlungsfeld empfunden haben

0 1 2 3 4 5 6 7 8 9 10
Kein Schmerz ☺ ⟶ ☹ Schmerz unerträglich

Geben Sie bitte durch Ankreuzen ☒ die **momentane Schmerzstärke** an, die Sie im Behandlungsfeld empfinden

0 1 2 3 4 5 6 7 8 9 10
Kein Schmerz ☺ ⟶ ☹ Schmerz unerträglich

Geben Sie bitte durch Ankreuzen ☒ die **Körperregion(en) außerhalb des Behandlungsfeldes** an, in der Sie während der Liegezeit zusätzliche Schmerzen empfunden haben

Geben Sie bitte durch Ankreuzen ☒ die **maximale Schmerzstärke** an, die Sie in der/den genannten Körperregionen während der Liegezeit empfunden haben

0 1 2 3 4 5 6 7 8 9 10
Kein Schmerz ☺ ⟶ ☹ Schmerz unerträglich

SCHMERZFRAGEBOGEN BRACHYTHERAPIE LIEGEZEIT Seite 2

Bitte beurteilen Sie durch Ankreuzen ☒ die Intensität der gesamten Schmerzerfahrung während der Liegezeit

❑ schmerzfrei
❑ gering/leicht
❑ unangenehm
❑ belastend
❑ fürchterlich
❑ qualvoll

Geben Sie bitte durch Ankreuzen ☒ das Ausmaß der psychischen Belastung an, die Sie während der Liegezeit empfunden haben.

0 1 2 3 4 5 6 7 8 9 10
Keine psychische Belastung ☺ ⟶ ☹ Unerträgliche psychische Belastung

Bitte beurteilen Sie durch Ankreuzen ☒ Ihre Schlafqualität in der vergangenen Nacht

0 1 2 3 4 5 6 7 8 9 10
Ausgezeichnet ☺ ⟶ ☹ Ungenügend

Wie zufrieden sind Sie insgesamt mit der Schmerztherapie während der Liegezeit?

0 1 2 3 4 5 6 7 8 9 10
Sehr zufrieden ☺ ⟶ ☹ Sehr unzufrieden

CONCLUSION:
Pain during maintenance phase of HDR-brachytherapie was well controlled by the combination of epidural anaesthesia and i.v. analgosedation.
A relevant number of patients (15%) experienced pain outside the treatment area, which may be related to immobilization between fractions and anxiety.
The weak correlation between level of pain and perceived psychological distress may point towards other factors like anxiety, feelings of helplessness, immobilization and organizational problems being of higher causal importance in the development of PTSD after brachytherapy than pain level itself.