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Anderson, JM, Gibbison, R, Twigg, JA et al. (1 more author) (2021) Development of a protocol for assessment of suicide risk in patients with head and neck cancer. British Journal of Oral and Maxillofacial Surgery, 59 (1). E23-E26. ISSN 0266-4356

https://doi.org/10.1016/j.bjoms.2020.08.004

Development of a protocol for assessment of suicide risk in patients with Head and Neck Cancer

Anderson JM[1], Gibbison R[2], Twigg JA[3], Kanatas A[4]

1. Jane Anderson, BSc(hons) Trainee Advanced Clinical Practitioner/Registered Mental Health Nurse, Leeds Teaching Hospitals Trust
   jane.anderson15@nhs.net

2. Rebecca Gibbison, BDS(hons), MFDS, RCPS, Dental Core Trainee, Leeds Teaching Hospitals Trust
   r.gibbison@nhs.net

3. Joshua Twigg, BDS(hons), PhD, Dental Core Trainee / Academic Clinical Fellow, Leeds Teaching Hospitals Trust and Leeds Dental Institute
   denjtw@leeds.ac.uk

4. Professor Anastasios Kanatas, MFDSRCS, FRCS (OMFS), MD, PGC, FHEA. Consultant Surgeon / Professor, Leeds Teaching Hospitals and St James Institute of Oncology and Leeds Dental Institute.
   a.kanatas@doctors.org.uk

Address for correspondence: Anastasios Kanatas, BSc (Hons), BDS, MBChB (Hons), MFDSRCS, MRCSRCS, FRCS (OMFS), MD, PGC, FHEA, Consultant Surgeon, Professor, Leeds Teaching Hospitals and St James Institute of Oncology, Leeds Dental Institute and Leeds General Infirmary, LS1 3EX.

Tel: +44 7956603118

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Abstract

Head and neck cancer (HNC) is the 7th most prevalent cancer globally, with an increasing incidence in recent years which is expected to continue. For many patients, the experience of receiving a diagnosis of HNC and subsequent treatment is disturbing and traumatic. Evidence suggests that HNC patients have a significantly increased risk of suicide compared with other cancer patients and the general population. Multiple social and medical factors may increase suicide risk in an individual and include smoking and alcohol misuse. Given the elevated rate of suicide among HNC patients it is prudent to routinely assess patients for suicidal ideation to prevent unnecessary deaths by suicide. However, to the authors' knowledge, such assessments are not undertaken in most centres. This article describes the development of a suicide risk assessment protocol proposed for use in HNC patients in a major University Teaching Hospital in Leeds. The basic structure of this protocol could easily be adopted to other centres.

Introduction

Suicide is a potentially preventable cause of mortality with a national collaboration of experts, charities and stakeholders urging a zero suicide strategy[1]. Suicide assessment tools are routinely used in mental health settings and Emergency Departments[2]. However, use in OMFS outpatient settings is uncommon. We have developed a protocol to be adopted at our centre across all specialties, including HNC patients.

Methods

Three suicide risk tools were evaluated: the Suicide Intent Scale[3] (SIS), Sad Persons Scale[4] (SPS) and the Suicidal Behaviors Questionnaire – Revised[5] (SBQ-R). SIS was discounted as it evaluates future risk of suicide based upon historic self-harm or suicide attempt rather than

evaluating the risk of suicide based upon the current mental health presentation. SPS was ruled out due to a lack of evidence supporting its efficacy in accurately predicting suicide despite wide use[6]. SBQ-R was selected as an appropriate tool for identifying HNC patients at potential risk of suicide. This concise questionnaire consists of four questions which consider key aspects of suicidality to generate a numerical score indicative of potential suicide risk (Figure 1a) The SBQ-R has been validated as having high specificity and sensitivity[5] in clinical and non-clinical populations (Figure 2). The questionnaire is brief, directly addresses suicidal ideation, is suitable for use in a divergent patient population and could be employed for HNC patients at all stages of their cancer journey. In particular, the brevity of the questionnaire facilitates incorporation into outpatient appointments without imposing a high demand on the limited clinical time available.

Proposed protocol and workflow

Following completion of the SBQ-R by a patient, a member of the care team can use the scoring system (Figure 1b) to generate a numerical suicide risk assessment. An SBQ-R item 1 score of 1-2 +/- a total SBQ-R score of 1-7 indicates ideation which may manifest as experiencing passing death wish or persistent thoughts about death, but suggests an individual has no active plans to end life. An SBQ-R item 1 score >2 +/- SBQ-R total score ≥8 is indicative of an individual actively planning to end their life and therefore unable to maintain their own safety. This constitutes a psychiatric emergency[7]. Figure 3 outlines a workflow for clinical management of patients according to their suicide risk as determined by SBQ-R assessment. This protocol is not intended to replace formal psychiatric assessment but provides a mechanism to initiate assessment and treatment of patients by appropriate mental health professionals; enabling safeguarding of individuals most at risk. Regardless of SBQ-R score, we propose that all patients, with a history of head and neck cancer diagnosis and treatment (excluding skin cancer patients, unless there is severe facial disfigurement and / or loss of

function), would benefit from the assessment of suicide risk and an information leaflet providing contact details of local mental health charities and support services. A frequently expressed concern around suicide screening in high risk individuals is the potential risk of triggering suicidal ideation or attempted suicide. However, there is robust evidence that suicide screening and prevention initiatives pose no such risk, and may even confer a small protective effect against suicide if applied sensitively with appropriate follow-up care[8]. Not all patients may wish to engage in conversations regarding suicide. Some patients may not admit to their suicidal intent or ideation due to religious[9] or cultural beliefs[10], while others may chose not to divulge an active plan to end their life to prevent intervention from professionals[11]. Patients have the right to decline the questionnaire but attending practitioners should be mindful of their mental state, consider any non-verbal cues, asses their capacity and document the outcome in the clinical notes. In terms of the timing of SBQ-R, we envisaged the first questionnaire being completed on the ward post operatively (when well enough), then at 3 months, 6 months and annually thereafter. This approach coincides with the time intervals that patients will have their Health-Related Quality of Life assessed by members of the clinical team, with specific tools.

Recommendations for practice

Assessment of mental state inclusive of suicide risk assessment, should constitute an integral part of the management of HNC patients, from the time of diagnosis to at least 1 year following completion of therapy. Our protocol is a local example of how we plan to achieve this aim in an outpatient setting. Our recommendation is that other HNC Departments should consider implementing similar systems to enable identification of patients at high risk of suicide to avoid preventable deaths.

Conflict of Interest

No conflict of interest reported by any of the authors.

Acknowledgements

We would like to thank Tim Whaley and Elanor Scott for their advice during the development of this protocol.

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Figure 1a: SBQ –R patient questionnaire

SBQ-R Suicide Behaviors Questionnaire-Revised

Patient Name _____ Date of Visit _____

Instructions: Please check the number beside the statement or phrase that best applies to you.

1. Have you ever thought about or attempted to kill yourself? (check one only)

- ☐ 1. Never
- ☐ 2. It was just a brief passing thought
- ☐ 3a. I have had a plan at least once to kill myself but did not try to do it
- ☐ 3b. I have had a plan at least once to kill myself and really wanted to die
- ☐ 4a. I have attempted to kill myself, but did not want to die
- ☐ 4b. I have attempted to kill myself, and really hoped to die

2. How often have you thought about killing yourself in the past year? (check one only)

- ☐ 1. Never
- ☐ 2. Rarely (1 time)
- ☐ 3. Sometimes (2 times)
- ☐ 4. Often (3-4 times)
- ☐ 5. Very Often (5 or more times)

3. Have you ever told someone that you were going to commit suicide, or that you might do it? (check one only)

- ☐ 1. No
- ☐ 2a. Yes, at one time, but did not really want to die
- ☐ 2b. Yes, at one time, and really wanted to die
- ☐ 3a. Yes, more than once, but did not want to do it
- ☐ 3b. Yes, more than once, and really wanted to do it

4. How likely is it that you will attempt suicide someday? (check one only)

- ☐ 0. Never
- ☐ 1. No chance at all
- ☐ 2. Rather unlikely
- ☐ 3. Unlikely
- ☐ 4. Likely
- ☐ 5. Rather likely
- ☐ 6. Very likely

Figure 1b: SBQ-R assessor scoring system

SBQ-R - Scoring

Item 1: taps into *lifetime* suicide ideation and/or suicide attempts			
Selected response 1	Non-Suicidal subgroup	1 point	
Selected response 2	Suicide Risk Ideation subgroup	2 points	
Selected response 3a or 3b	Suicide Plan subgroup	3 points	_____
Selected response 4a or 4b	Suicide Attempt subgroup	4 points	**Total Points**

Item 2: assesses the *frequency* of suicidal *ideation* over the past 12 months			
Selected Response:	Never	1 point	
	Rarely (1 time)	2 points	
	Sometimes (2 times)	3 points	
	Often (3-4 times)	4 points	_____
	Very Often (5 or more times)	5 points	**Total Points**

Item 3: taps into the *threat of* suicide *attempt*			
Selected response 1		1 point	
Selected response 2a or 2b		2 points	_____
Selected response 3a or 3b		3 points	**Total Points**

Item 4: evaluates *self-reported likelihood* of suicidal behavior in the future			
Selected Response:	Never	0 points	
	No chance at all	1 point	
	Rather unlikely	2 points	
	Unlikely	3 points	
	Likely	4 points	
	Rather Likely	5 points	_____
	Very Likely	6 points	**Total Points**

Sum all the scores circled/checked by the respondents.
The total score should range from 3-18.

_____
Total Score

Figure 2. Specificity, sensitivity and AUC values for SBQ-R in clinical (adult inpatient) and non-clinical (undergraduate college student) samples

AUC = Area Under the Receiver Operating Characteristic Curve; the area measures discrimination, that is, the ability of the test to correctly classify those with and without the risk. [.90-1.0 = Excellent; .80-.90 = Good; .70-.80 = Fair; .60-.70 = Poor]

	Sensitivity	Specificity	PPV	AUC
Item 1: a cutoff score of ≥ 2				
• Validation Reference: Adult Inpatient	0.80	0.97	.95	0.92
• Validation Reference: Undergraduate College	1.00	1.00	1.00	1.00
Total SBQ-R : a cutoff score of ≥7				
• Validation Reference: Undergraduate College	0.93	0.95	0.70	0.96
Total SBQ-R: a cutoff score of ≥ 8				
• Validation Reference: Adult Inpatient	0.80	0.91	0.87	0.89

Figure 3. Protocol for managing individuals considered at high risk of suicide