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Case report

A Case Study Report: Soft Palate Cancer

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Abstract

Soft palate cancer is considered a type of throat cancer. Doctors treat soft palate cancer similarly to the way they treat other types of throat cancers — often with a combination of surgery, radiation therapy and chemotherapy. Some signs and symptoms of soft palate cancer are bleeding, difficulty in swallowing, speaking, bad breath, mouth pain Sores in your mouth that won't heal Loose teeth Weight loss Ear pain Swelling in your neck that may hurt White patches in your mouth that won't go away. Patients with squamous cell carcinoma of the palatine complex, frequently have long histories of excessive use of alcohol and tobacco. In this series, 99% of patients had some history of smoking and more than half were moderate to heavy drinkers. The synergistic effect of these cocarcinogens is well known and explains the high rate of second primary tumors, as well as premalignant erythroplasia frequently seen in patients with carcinoma of the oropharynx. In therapy for squamous cell carcinoma of the palatine complex, outcome will be influenced by the size and location of the primary lesion, contiguous spread, and the presence of manifest or occult regional metastasis. In addition, one must consider the patient's concomitant functional impairment from full-thickness surgical defects of the palate.

Introduction

Oropharyngeal cancer is a disease in which malignant (cancer) cells form in the tissues of the oropharynx. It is the type of Head and Neck Cancer. Most oropharyngeal cancers are squamous cell carcinoma. Squamous cell are the thin, flat cells lining the inside of the oropharynx. The oropharynx is the middle part of the pharynx (throat), behind the mouth. The pharynx is a hollow tube about 5 inches long that starts behind the nose and ends where the trachea (windpipe) and oesophagus (tube from the throat to the stomach) begin. Air and food pass through the pharynx on the way to the trachea or the oesophagus [1,2].

The oropharynx includes the soft palate, side and back walls of the throat, tonsils, back one-third of the tongue. Oral cancers are usually the result of lifestyle and habits, and soft palate cancer is no different. Some of the risky behaviour that can lead to this type of cancer include heavy tobacco and alcohol use (particularly when used together), infection with Human Papillomavirus (HPV), being older than 40, and a poor diet. Because palate of the cancer is typically a squamous cell carcinoma, swift removal is usually the first course of action to stop the spread. It was found that a combination of surgery, radiation and chemotherapy may be used to remove cancer cells and kill any remaining cells in the surgical area. Sign and symptoms include a sore throat that does not go away, trouble swallowing, trouble opening the mouth fully, trouble moving the tongue, weight loss for history of smoking cigarettes for more than 10 packs being infected with human papillomavirus no known reason, ear pain. A lump in the back of the mouth, throat, or neck, a white patch on the tongue or lining of the mouth that does not go away, coughing up blood Risk factors includes a (HPV), especially HPV type 16, personal history of head and neck cancer, heavy alcohol use, chewing betel quid, a stimulant commonly used in parts of Asia [3].

Epidemiology

Oral cancer is a public health problem, representing the sixth most common malignant neoplasm. The annual estimated incidence is approximately 300,000 oral cancers; two thirds of these cases occur in developing countries. The incidence of oral cancers among men is highest in northern India, a few areas of central and Eastern Europe and Latin America. Among women, the incidence is high in south and Southeast Asia. In Asian countries the high incidence rates were reported from developing nations like India, Pakistan, Bangladesh, Taiwan and Sri Lanka. While an increasing trend has been observed in Pakistan, Taiwan and Thailand, a decreasing trend is seen in Philippines and Sri Lanka. Some countries share specific risk factors namely heavy tobacco smoking and alcohol consumption and high intake of charcoal-grilled red meat and mate. [4] In addition, other specific risk factors are viral infection (HPV), poor oral hygiene, chewing of betel-quid, gutka, Zarda, Kharra, snuff and Qat. The average age of diagnosis is 62. About 25% of cases occur in people younger than 55, but these cancers are rare in children. Incidence rates for oral and oropharyngeal cancers in black people have decreased by 1% to 2% each year from 2007 to 2016. However, in the same period,

Human Papillomavirus (HPV)-related oral and oropharyngeal cancers among non-Hispanic white people have increased by around 1% per year. The overall 5-year survival rate for people with oral or oropharyngeal cancer is 65% [3,4].

Case Description

A 58yrs old male had been referred to Mahavir Cancer Sansthan, Patna having height 158cm and weight 44 kg presenting complaint of pain in throat and he was feeling trouble in swallowing. He did not have family history of cancer but he had history of Koch's disease 7yrs back which was treated fully. He was personally addicted with biddi, khaini, liquor. Physical examination, Clinical examination and laboratory investigation showed that it was a case of soft palate cancer; biopsy revealed that it was squamous cell carcinoma. It was diagnosed as locally advanced cancer Stage 4a in which soft palate was completely destroyed, Ulcerative growth proliferative half of hard palate and Post pharyngeal wall also involved. Biomarker studies showed that HCV, HIV, HPV 16are negative. A diagnosis of stage T4aN0M0was made. Chemotherapy was initiated. Weekly adequate hydratic Injection of Cisplatin 42mg was given intravenously according to body surface area of patient. Patient was followed up. Pharmacist intervention was needed in this case. As it was case of locally advanced cancer, combination therapy of cisplatin+5flourouracil should be prescribed. Oncologist care plan should be viewed again to maintain low BP and hyponatremia or to provide better patient outcomes.

Diagnosis

- X-ray Scarp (L) apex PostKochs
- CBC
- LFT
- KFT
- HPV
- Punch Biopsy for Palatal Growth

IMMUNO- HISTOCHEMSTRY REPORT
SPECIMEN: Tissue from oropharynx
MARKER STUDIES: HPV-16 negative in Tumour cell.
Type of Cancer
Biopsy examination: Squamous cell carcinoma
Grade of Tumor: 2
Stage of Cancer: (T4aN0M0) STAGE 4a
Ulcerative growth proliferative half of hard palate & soft palate completely destroyed
Post pharyngeal wall also involved (6mm*6mm Hard)

Laboratory Investigations

Table 1.A: Total blood count.

TEST Dx	MIN - RANGE	MAX RANGE	14-Jan	21-Jan	28-Jan	04-Feb	12-Feb
NEU %	40	70	81	77.1	79.2	83.6	84.6
LYM	20	40	8.9	8.6	10.8	7.3	5.3
EOS %	1	4	2.5	4.4	3.2	2	1.3
MON	2	8	7.2	9.5	6.5	6.8	8.3
BAS %	0	1	0.4	0.4	0.3	0.3	0.5
ALY %	0	2.5	0.5	0.8	1	0.8	0.6
LIC %	0	3	1.2	0.8	1.2	1	1.3

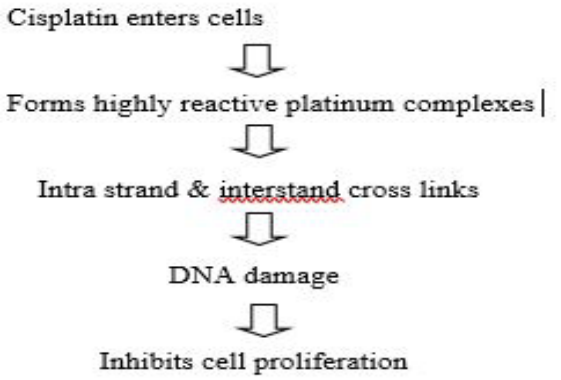
Cisplatin

- Forms crosslinks within DNA strands
- Cis-platin is not really an "alkylating "agent,
- Same mechanism as the alkylating agents, it is placed within that group
- Clinical uses
- Very powerful against TESTICULAR CANCER
- Also good for carcinomas of ovary, bladder, head, and neck [5]

Toxicity /side effects

- Renal tubular damage (minimized via massive hydration coupled with anti-emetics)
- Ototoxity and peripheral neuropathy
- Very severe vomiting

Mechanism of action



Preventions

- Avoid tobacco, smoking, alcohol
- Maintain proper oral hygiene
- Eat more fruits and vegetables.
- Suggest pan endoscopy for synchronous primary tumours
- Changes in cisplatin dose to avoid hypotension
- Adequate hydration and urinary output must be maintained during the following 24 hours.
- Pre-existing renal impairment, hearing impairment or myelosuppression. May need dose modification for renal impairment.

May increase the serum levels of renally excreted drugs.[6]

Table 1.B: Differential count.

TEST Dx	MIN RANGE	MAX RANGE	14-Jan	21-Jan	28-Jan	04-Feb	12-Feb
WBC 10^3/ mm/^3	4	11	11.9	7	6.9	6.3	8.7
RBC 10^6/ mm/^3	3.5	5.5	4.36	4.15	4.43	4.21	4.02
HGB g/Dl	12	16	13.6	13	13.9	13.4	13.2
HCT %	40	54	41.1	39.2	41.6	39.8	38.2
MCV fL	80	100	94.27	94.46	93.91	94.54	95.02
MCH pg	27	32	31.19	31.33	31.38	31.83	92.84
MCHC g/dL	32	36	33.09	33.16	33.41	33.67	34.55
RDW-SD fL	36	56	12.7	12.8	13	12.8	12.3
PLT 10^3/mm/^3	150	450	311	280	289	396	240
MPV fL	7.4	10.4	8.4	7.8	7.7	7.9	7.9

Table 1.C: Electrolytes count.

TEST Dx	MIN RANGE	MAX RANGE	14-Jan	21-Jan	28-Jan	04-Feb	12-Feb	17-Feb	22-Feb
SODIUM mEq/L	135	145	132	138	139	132	125	138	135
POTTASIUM mEq/L	3.5	5.5	3.6	4.9	4.6	4.5	4.6	5.7	5.3
CHLORIDE mEq/L	97	111	93	105	104	109	107	102	100

Table 1.D: Renal function test.

TEST Dx	MIN RANGE	MAX RANGE	23-Dec	14-Jan	21-Jan	28-Jan	04-Feb	12-Feb
BLOOD UREA mg%	13	50	17.12	38.52	36.38	36.38	21.4	25.68
BUN mg%	6	21	8	18	17	17	10	12
CREATININE mg%	0.7	1.3	0.71	0.69	0.64	0.69	0.74	0.77

Table 1.E: Liver function test

TEST Dx	MIN RANGE	MAX RANGE	14-Jan
BILIRUBIN TOTAL mg%	0.2	1.2	0.81
BILIRUBIN DIRECT mg%	0	0.4	0.25
BILIRUBIN INDIRECT mg%	0.1	0.6	0.56
SGOT (AST) U/L	10	35	32
SGPT (ALT) U/L	9	43	28
ALKALINE PHOSPHATASE U/L	40	150	98
PROTEIN TOTAL g%	6.5	8.5	7.8
ALBUMIN g%	3.5	5.3	3.9
GLOBULIN g%	1.8	3.6	3.9
A/G RATIO	1	2.1	1

Chemotherapy Sheet

Table 2.1: Regimen planned.

DRUGS	SURFACE AREA	DOSE	SCHEDULE	CYCLE
INJ. CISPLATIN	1.4/meter square	42 mg	D1	WEEKLY ADEQUATE HYDRATIC

Table 2.2: Treatment Schedule.

DATE	DRUG	DOSE	CYCLE	BLOOD PROFILE BP (mm/HG)	NEXT CYCLE
16/1/2020	INJ.CISPLATIN	42 mg	1ST CYCLE	110/80	23/1/2020
23/1/2020	INJ.CISPLATIN	42 mg	2ND CYCLE	110/80	30/1/2020
30/1/2020	INJ.CISPLATIN	42 mg	3RD CYCLE	100/60	6/2/2020
6/2/2020	INJ.CISPLATIN	42 mg	4TH CYCLE	100/90	26/2/2020
26/2/2020	INJ.CISPLATIN	42 mg	5TH CYCLE	100/70	4/3/2020

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