A PHASE 2 STUDY ON ROLE OF CURCUMIN IN POST SURGICAL PERINEAL WOUND HEALING AT A TERTIARY CANCER CARE CENTER, HBNI, MUMBAI.

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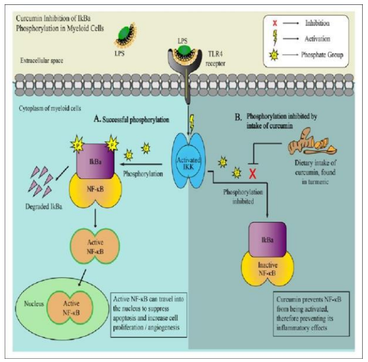
INTRODUCTION

CRCpredictedtodiscover1.93millioncases.0.94millionCRCrelateddeaths
By2040-globalnumberofnewCRCcasestoreach3.2million.ChinaandIndiatohavethehighestnumberofCRC. yue.xi,
Translational oncology , volume 14.issue 10 .October 2021, 101174
Typesofrectalresectionscanbelocalexcision,lowanteriorresection,abdominoperinealresection,totalmesorectalexcision,transanalendoscopicmicrosurgery. Curcumin is regardeda natural medicine, anti-oxidant and anti-neoplastic agent
Increasedlevelsofcurrentmicroorganismlipopolysaccharide(LPS)squaremeasurehavebeencausallylinkedtooccurrenceofdietinducedmetabolicdisorders, chronic inflammatory diseases and malignancies.
Curcuminregulatesthemultiplelayersoftheintestinalbarrierandsignificantlylowersplasmalipopolysaccharidelevels.
CurcumininhibitstheactivityofNF-()Btranscription,t1:5loweringtheassemblyIL-1cytokines,andtherebyreducinginflammation.
CurcuminactsontheVitDreceptor mediatedsignal,increasingparacellularpermeabilityandactivatingMAPK's(mitogenactivatedproteinkinase)viatriggering wound healing human keratinocytes.
c.jobin,imunol.1999Sep15;163(6):3474-83.

LEARNINGOBJECTIVES

Wound complications following APR aredelayed wound infection, abscess, dehiscence and protracted area sinus.
Morbiditythatneedsprolongedhospitalization,increased cost and family involvement with poor quality of life.
Percentageofwoundhealing:Complicationsaredescribed in 35% of APR cases .
Primary objective was to assess the effect of curcumin in post-surgicalperinealwoundhealinginGIsurgerypatients andsecondary objective wasto assess the safety of curcumin.



Researchapproach:quantitative approach
Researchdesign:singlearmstudydesign
Samplingtechnique: Probabilitysamplingtechnique sample size 35
StandardwoundtreatmentinAPRwaswounddressingwith noother ointments and solutions
Methodology-Oralcurcuminof500mgtabletgiventhricea day from day -5 (five days before the surgery) after foodtill day 21 in post-operative patients undergone GI surgery of APR, Day 27beingthe final wound assessment.
Inclusioncriteria-Patientsplannedforrectalresection witha perineal phase of operation with 18- 75 years of age , with comorbiditiesofhypertensionanddiabetesandpatientsfrom TMH and ACTREC and **exclusion** being patients with primary squamouscellcarcinoma ofrectal cancer andactiveperineal infection prior to surgery.
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MATERIALSANDMETHODS

SURGICAL WOUND ASSESSMENT TOOL (SWAT)

Patient code No: ..... Date of admission: ..... Date of operation: .....

After operation at first assessment

A. Patient, disease factors				Score
1.Age (equal or greater than 65 years)	No = 0		Yes = 1.5	
2. BMI (Kg/m²)	Less than 18.5 (underweight) = 1	18.5-22.9 (normal) = 0	23-27.5 (overweight) = 0.5	Over 27.5 (obese) = 1.5
3.Diabetes: (currently diagnosed with diabetes)	No = 0		Yes, the level of HbA1C before surgery? • Unknown = 1 • Less than or equal to 7% = 1 • Greater than 7% = 2	
4. Smoking	Non-smoking = 0	Previously smoked but gave up at least 4 weeks before surgery = 1.5		Currently smoking = 2
5. Use of steroids	Not used at all or used for less than 30 days before surgery = 0		Used regularly for more than 30 days before surgery = 1	
6. Chemotherapy	Not received at all = 0		Received either currently or in the 30 days before surgery = 1	
7. Immune deficiency (e.g. HIV, kidney failure, infectious disease)	No = 0		Yes = 1	
8. Risk of malnutrition (e.g. decreased food intake and/or unintentional weight loss over the last three months)	No = 0		Yes = 1	
9. Trauma wound	No = 0		Yes, the duration from injury to surgery? • Less than 6 hours = 1 • Greater than 6 hours = 2	
			Sub TOTAL A	

B. Wound characteristics				Score
10. Wound bed	Incision edges closed = 0 / Mostly epithelialising = 0 / Mostly granulating = 1 / Mostly sloughy = 2 / Mostly necrotic = 3		Mostly epithelialising = 0 / Mostly granulating = 1 / Mostly sloughy = 2 / Mostly necrotic = 3	
19. Swelling at incision and/or surrounding tissue	No = 0		Yes = 1	
20. Erythema at incision or within 4cm of wound edges	No = 0		Yes = 1	
21. Signs of haematoma (e.g. focused area of swelling, hardness or bruising, palpable)	No signs of haematoma = 0		One or more signs of haematoma = 1	
22. Exudate: colour and type	Mostly clear, amber = 0	Mostly bloodstained = 1	Mostly cloudy, milky = 2	Mostly green or yellow = 3
23. Exudate volume	Dry (no visible exudate) = 0	Moist (less than 50% exudate on dressing) = 0	Wet (50-75% exudate on dressing) = 1	Saturated (over 75% on dressing, leakage to secondary dressing, or increased volume in drain tube) = 2
24. Odour	None = 0	Present after removing dressing = 1	Present before dressing removed = 2	
25. Surgical wound cleaning agents	Iodine = 0	Sodium chloride 0.9% = 1	Both = 0	
26. Wound pain on a numeric rating scale 0 -10	0 (no pain) = 0	1 - 3 (mild) = 0	4 - 6 (moderate) = 0	7 - 10 (severe) = 1
			Sub TOTAL C	
			TOTAL SWAT SCORE (A+B+C)	

Scoring–higherthescoringindicatesthecontaminationandlesserindicateswoundhealing
A-10.5
B–10
C-17.0
Total37.5

RESULTS

Surgicalwoundcontamination

	N	Mean	Std. Deviation	Mean Rank	Chi square	P value	Significance
Surgicalwoundcontamination classificationB1	35	0.0000	0.00000	1.41	41.78	0.001	Significant
Surgicalwoundcontamination classificationB2	35	1.1286	.62241	2.71			
Surgicalwoundcontamination classificationB3	35	1.4143	.57504	1.87			

Wounddimensionlength

	N	Mean	Std. Deviation	Mean Rank	Chi square	P value	Significance
Wounddimension length	35	12.8143	2.49141	2.89	57.292	0.001	Significant
Wounddimension length	35	9.7429	4.23114	1.97			
Wounddimension length	35	7.8286	2.95541	1.14			

WoundBedMostlygranulating

	N	Mean	Std. Deviation	Mean Rank	Chi square	P value	Significance
Wound Bed Mostly granulating_C_1	35	0.5429	0.81684	1.84	2.881	0.237	Not Significant
Wound Bed Mostly granulating_C_2	35	0.7429	.56061	2.16			
WoundBed_Mostly_ granulating_C_3	35	.6000	.49705	2.00			

WoundBedMostlysloughy

	N	Mean	Std. Deviation	Mean Rank	Chi square	P value	Significance
WoundBedMostly sloughy_C_1	35	0.0857	0.37349	1.46	44.327	0.001	Significant
WoundBedMostly sloughy_C_2	35	1.5429	.74134	2.74			
WoundBedMostly sloughy_C_3	35	.4000	.65079	1.80			

Odour

	N	Mean	Std. Deviation	Mean Rank	Chi square	P value	Significance
OdourC_1	35	0.0000	0.00000	1.49	38.268	0.001	Significant
OdourC_2	35	0.8824	.59108	2.63			
OdourC_3	35	.3529	.64584	1.88			

SubtotalBScore

	N	Mean	Std. Deviation	Mean Rank	Chi square	P value	Significance
SubtotalB_1	35	3.4143	0.64723	1.59	39.626	0.001	Significant
SubtotalB_2	35	4.5700	.89247	2.81			
SubtotalB_3	35	3.3000	1.37306	1.60			

SubtotalCscore

	N	Mean	Std. Deviation	MeanRank	Chi square	P value	Significance
SubtotalC_1	35	3.6765	1.55155	1.51	36.01	0.001	Significant
SubtotalC_2	35	9.2794	3.59122	2.82			
SubtotalC_3	35	4.3235	3.08192	1.66			

DISCUSSION

SibusisoAlven'sstudyonpolymerbasedmaterialloadedwithcurcuminhadproven atobeabestwoundhealerandourstudyshowedoralcurcuminasan effectivewound healer in the perineal area for patients with colorectal cancers[1].
Zhen-YuHeetalconcludedthatcurcumintreatmentimprovedthegeneralhealthofpatientswithcolorectalcancerviathemechanismofincreasedp53molecule expression in tumor cells and consequently sped up tumor cell apoptosis and it was agreed in our study of the quick wound healing [2].
Nita.Cfoundupto8000milligramcurcuminassafeadministrationandDhilloninherstudystatedaboutthetoleranceoforalcurcuminof8gmdailyinthisstudywe administered 1500mg of curcumin per daysafely without no adverse sideeffects[3,6].
Toan-ThangPhanandYokosaidtheepidermalsafetyofcurcuminandourstudystatedthesignificantgranulationofthewoundbed[4].

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