



Azienda Ospedaliera Universitaria
Seconda Università degli Studi di Napoli
DAI di Medicina Interna e Specialistica
Unità Operativa Complessa di Epato-Gastroenterologia
UO di Endoscopia Digestiva
Direttore Prof.ssa Carmelina Loguercio



**Il Ruolo dell'Apparato Digerente
nella Nutrizione Umana
principali Patologie del Colon-Retto**

Pasquale Esposito
&
The Digestive Endoscopy Team

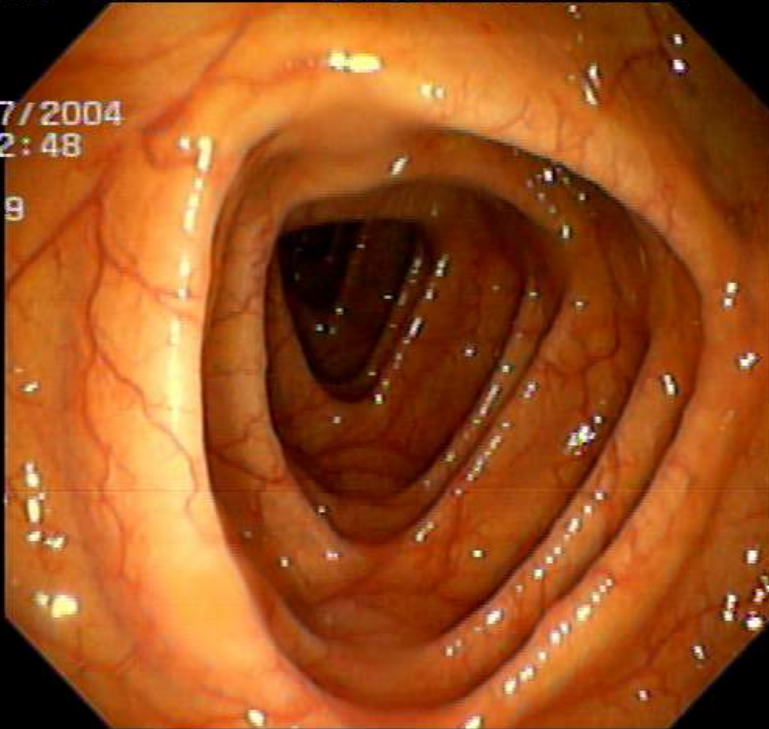
Principali Patologie del Colon-Retto

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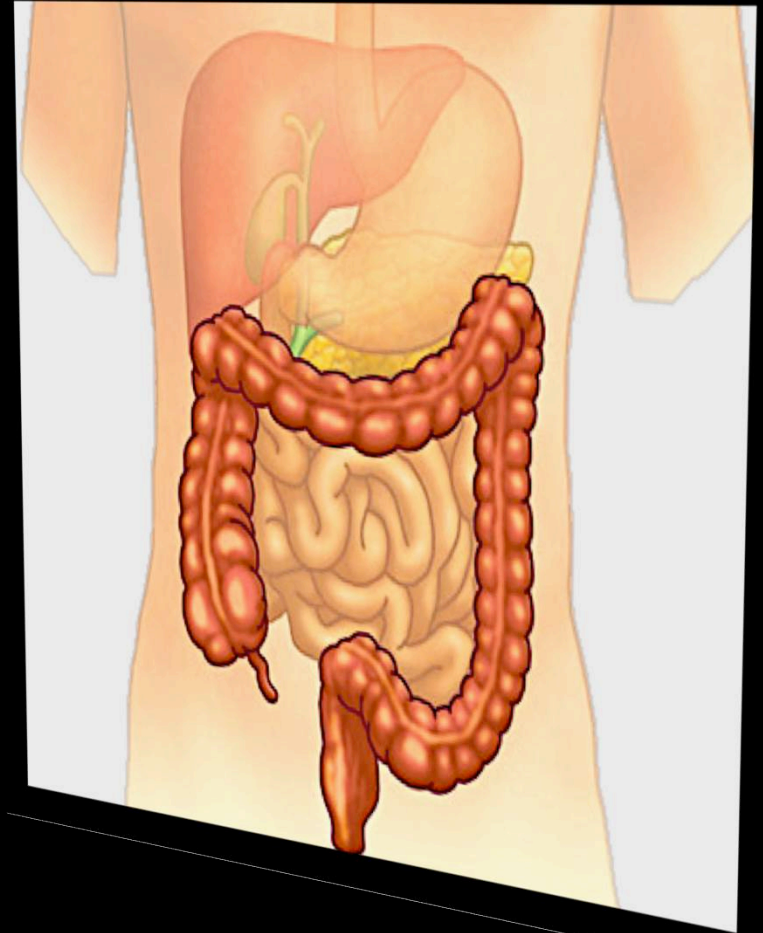
GASTROENTEROLOGIA

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Principali Patologie del Colon-Retto

Patologie benigne del colon

Malattia diverticolare

Sindrome del colon irritabile (IBS)

Polipi coloretali

Malattie Infiammatorie Croniche
Intestinali (MICI)

Rettocolite Ulcerosa

Malattia di Crohn

Coliti Indeterminati

Neoplasie

Cancro del colon

Cancro del retto

Cancro anale

Poliposi Adenomatosa Familiare (PAF)

Disordini Ano-rettali

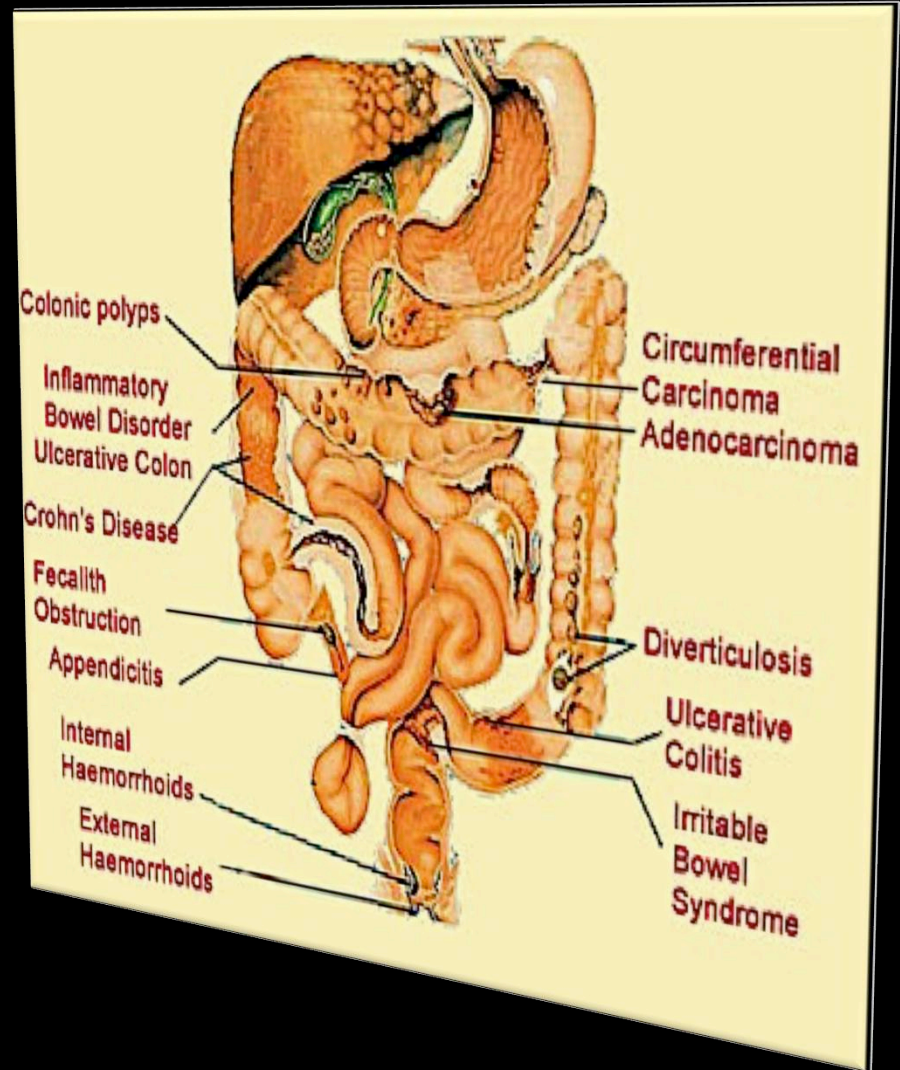
Fistola anale

Ascesso perianale

Fistola rettovaginale

Emorroidi

Proctiti da radiazioni



La Ileocolonscopia

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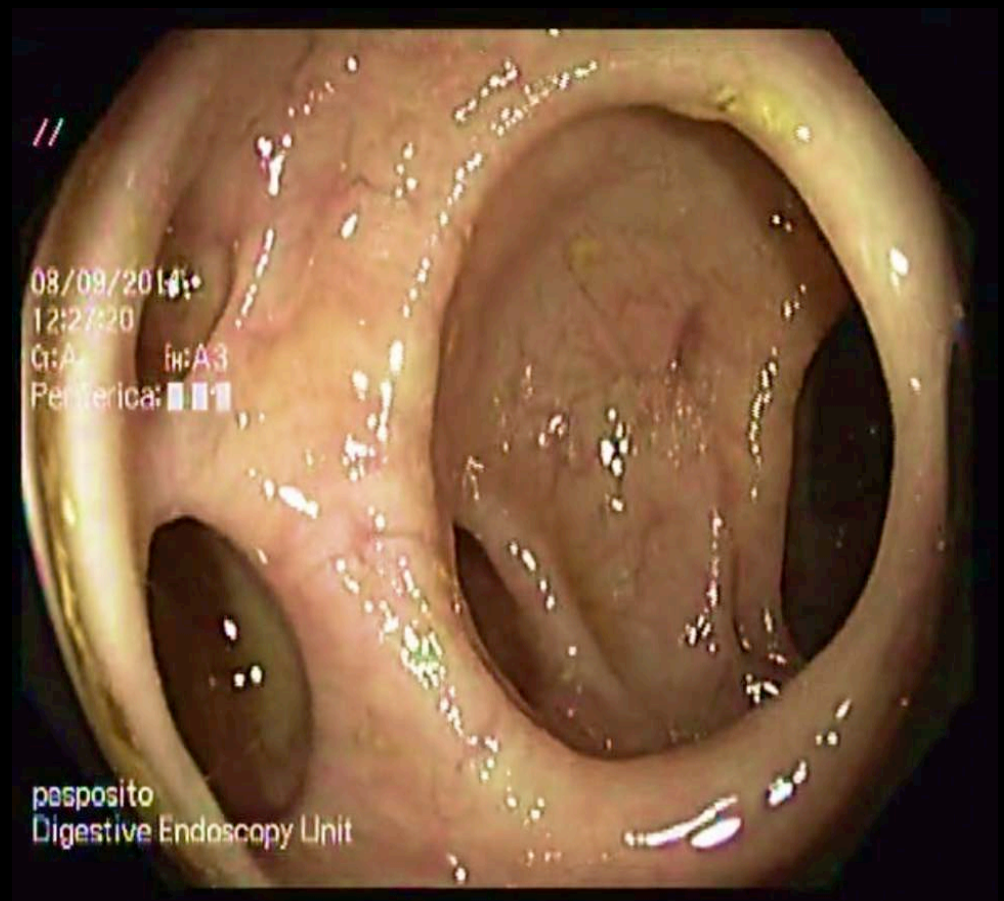
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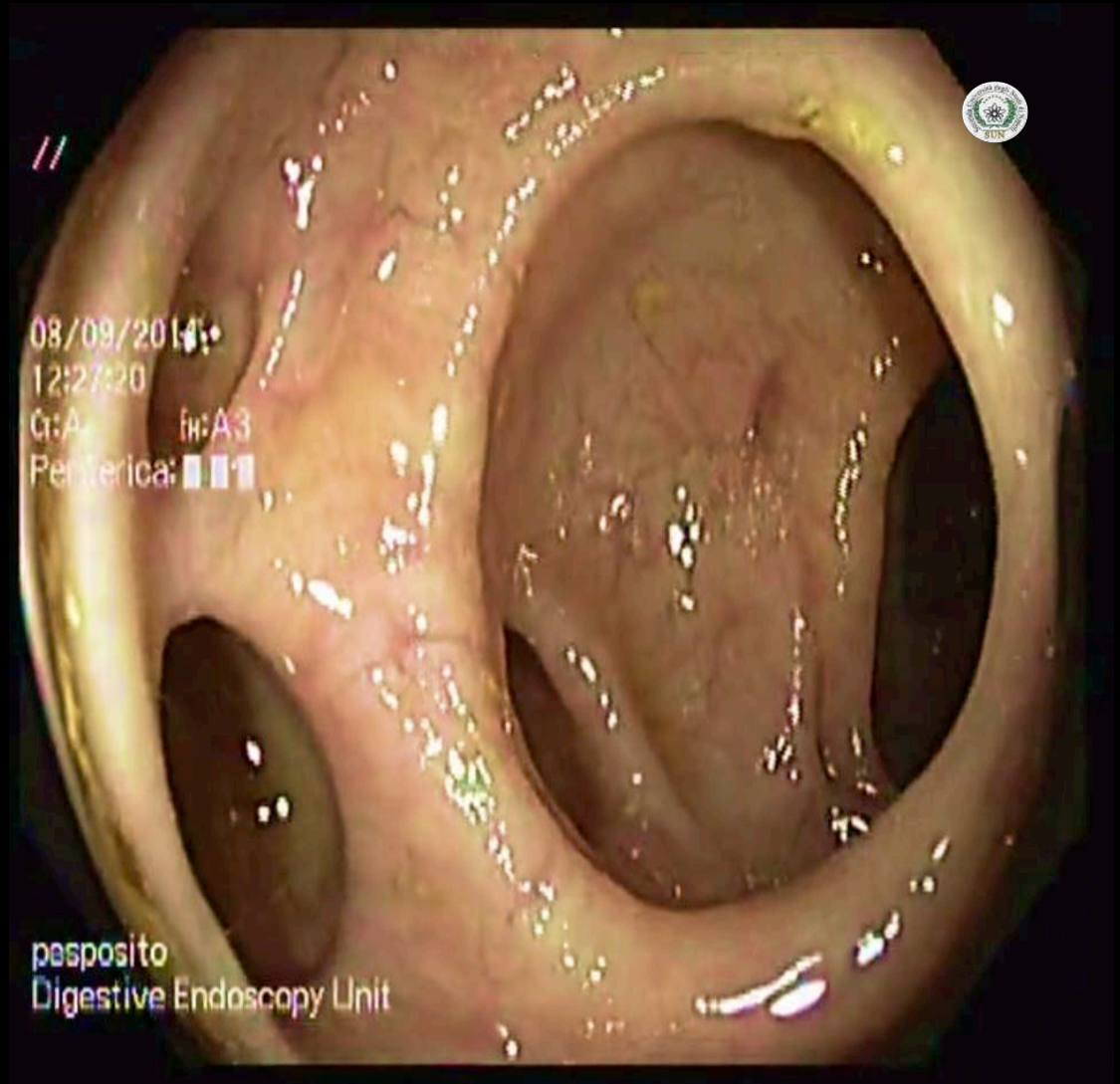
Emorroidi

Proctiti da radiazioni



LA MALATTIA DIVERTICOLARE

- ❑ HISTORY
- ❑ TERMINOLOGY
- ❑ TAXONOMY
- ❑ EPIDEMIOLOGY
- ❑ PATHOPHYSIOLOGY
 - ⊙ Structural Abnormalities
 - ⊙ Disordered Intestinal Motility
 - ⊙ Dietary Fiber Deficiencies
 - ⊙ Additional Factors
 - INFLAMMATION
 - NONSTEROIDAL ANTIINFLAMMATORY DRUGS
 - SMOKING
 - PHYSICAL ACTIVITY/OBESITY
 - CAFFEINE AND ALCOHOL INGESTION
 - ROLE OF COLONIC FLORA
- ❑ DEVELOPMENT OF SYMPTOMS
- ❑ DIAGNOSIS
- ❑ THERAPY



HISTORY

TERMINOLOGY

TAXONOMY



- ✓ Alexis Littre, a French surgeon, first described it in the late 1700s;
- ✓ In 1815, Fleischman coined the term, divertikel;
- ✓ Jean Cruveilhier described herniations through the muscular layer of the colon in 1849;
- ✓ In 1869, Klebs was the first to link the development of diverticula to constipation;
- ✓ Graser described the inflammation of diverticula, known as diverticulitis in 1899;
- ✓ Mayo and his colleagues first described the surgical management of diverticulosis, but noted that most cases did not require invasive procedures;
- ✓ Beer correlated the clinical and histologic findings of the disorder in 1904;
- ✓ in 1914, Case presented radiographic findings;
- ✓ In 1971, Painter and Burkitt published a milestone article delineating the role of dietary fiber in the prevention of diverticulosis.

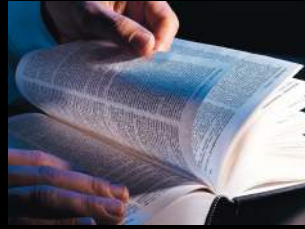
INGESTION

ROLE OF COLONIC FLORA

DEVELOPMENT OF

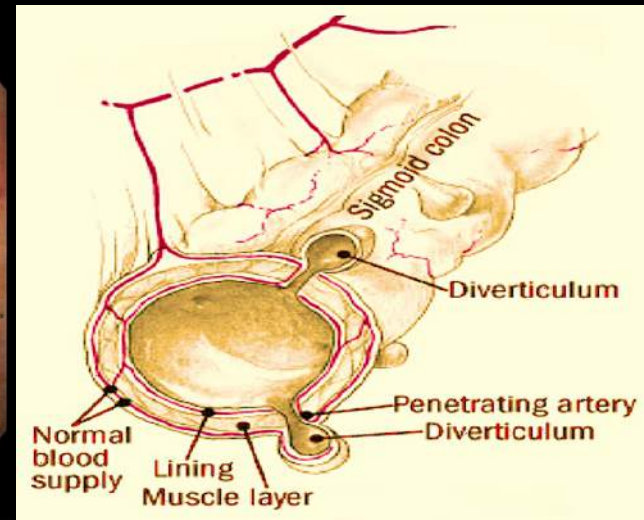
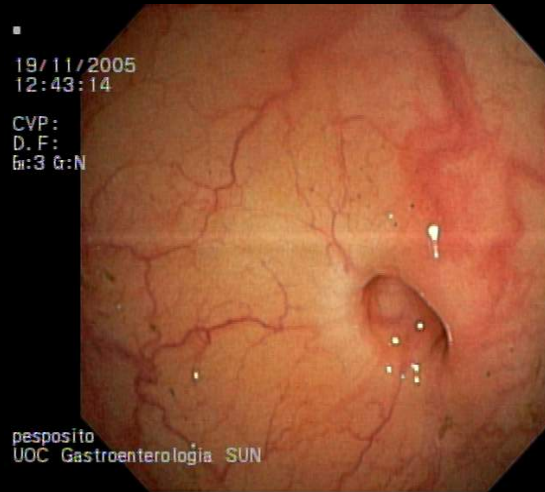
SYMPTOMS

LA MALATTIA DIVERTICOLARE



Diverticolo:

Protrusione o erniazione della mucosa attraverso lo strato muscolare del colon nel locus minoris resistentiae (passaggio vasa recta), formante un sacco costituito da mucosa, connettivo e sierosa.



T. Wedel, et al.
Anatomie und Pathogenese der Divertikelkrankheit
Der Chirurg Vol.85, Is. 4, pp 281-288, 2014

□ HISTORY

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□ PATHOPHYSIOLOGY

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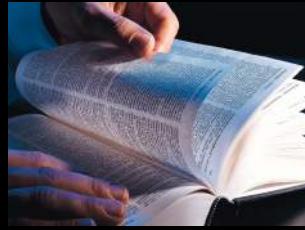
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○ ROLE OF COLONIC FLORA

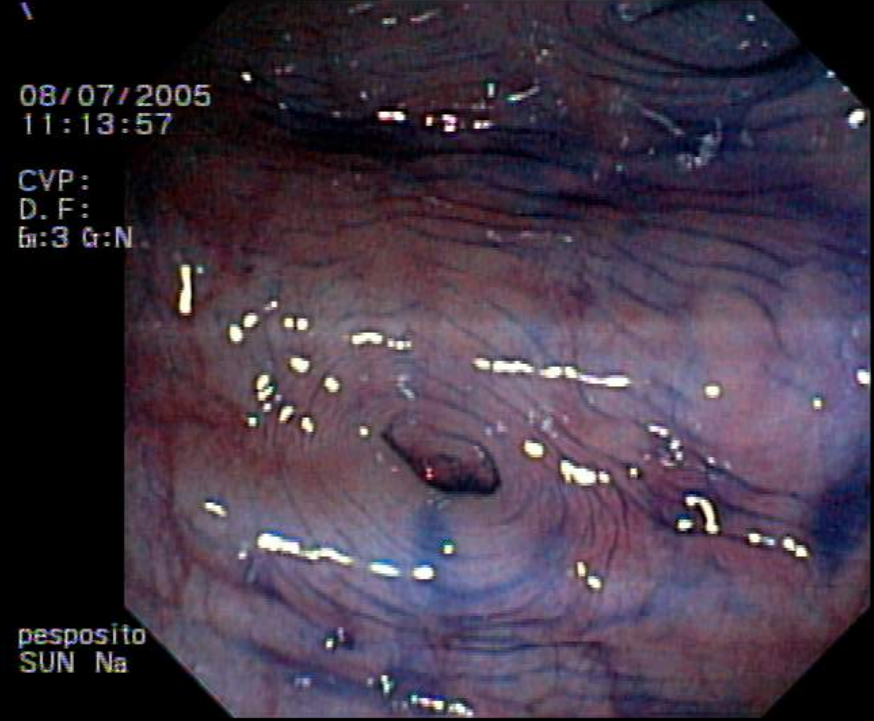
□ DEVELOPMENT OF
SYMPTOMS

LA MALATTIA DIVERTICOLARE

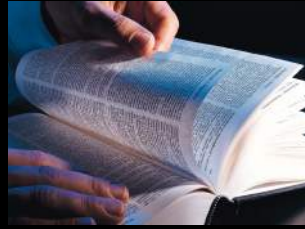


Diverticolo:

Diverticolo = “pseudo-diverticolo” -----> potenziale rischio di perforazione in caso di resezione di “diverticolo introflesso”. Importante differenziare lesione polipoide da diverticolo introflesso (insufflazione, pressione con pinza, cromoendoscopia tradizionale o virtuale, aspetto morfologico tipo “Aurora rings”)

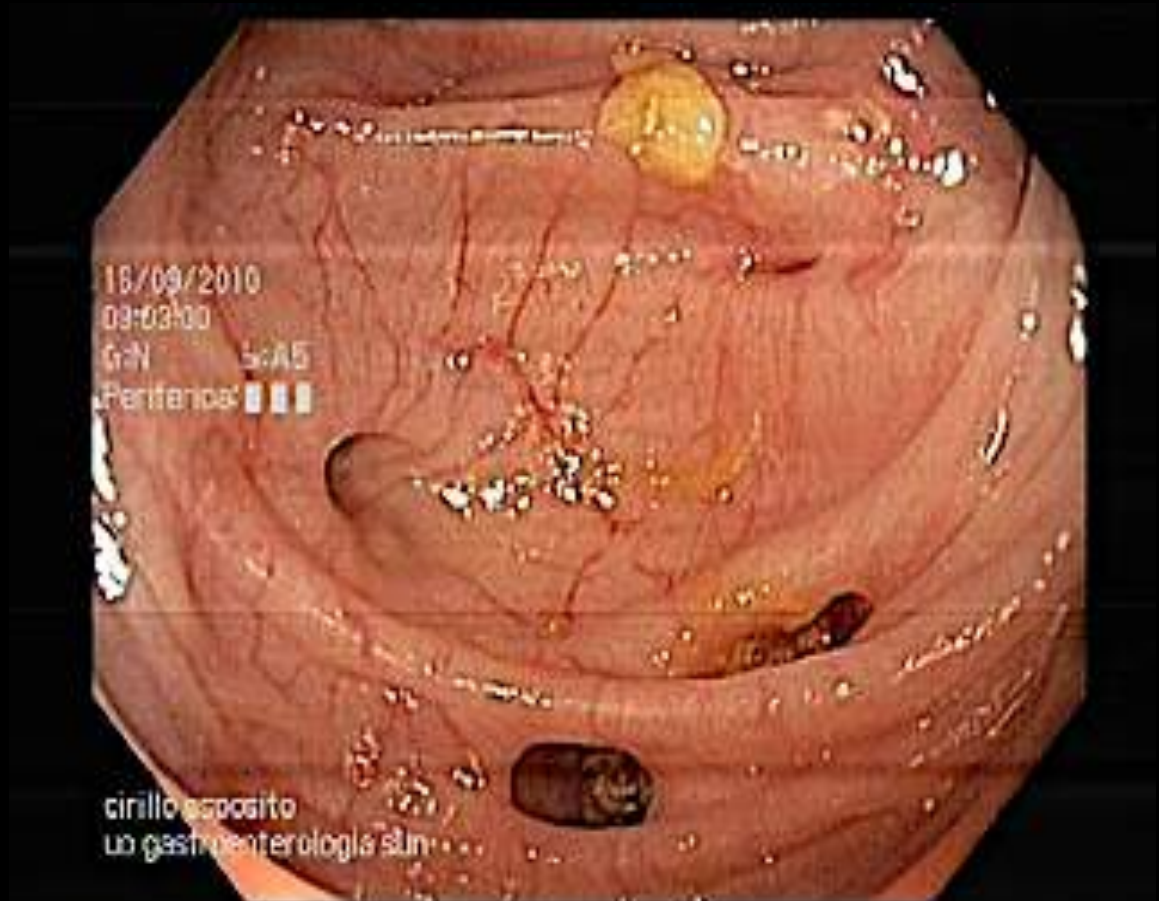


LA MALATTIA DIVERTICOLARE



Diverticolosi:

Descrive semplicemente la presenza di diverticoli



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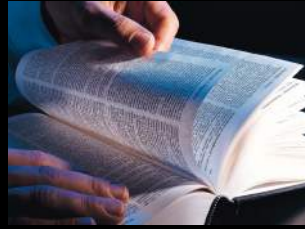
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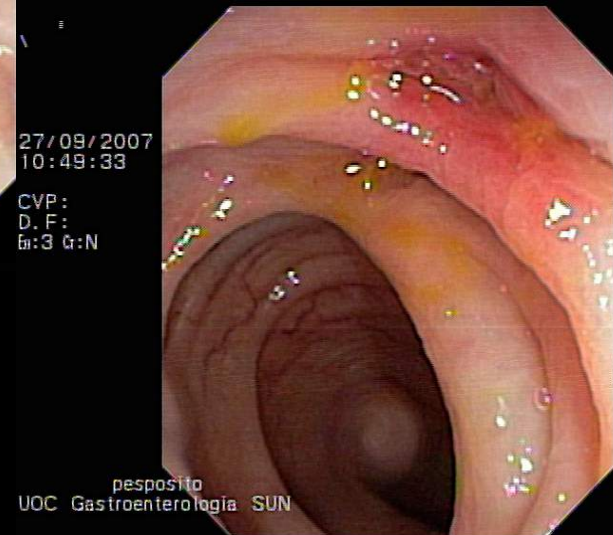
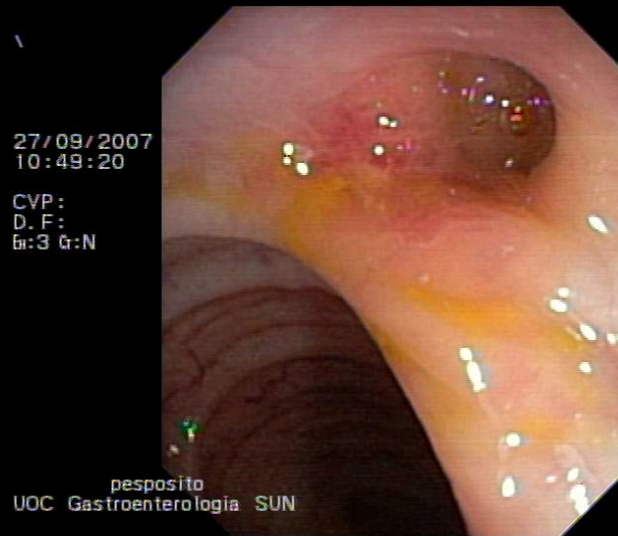
DEVELOPMENT OF
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LA MALATTIA DIVERTICOLARE



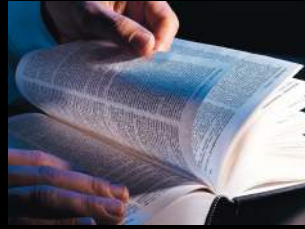
Diverticolite:

Infiammazione del diverticolo, in genere associata a microperforazione o perforazione evidente; condizionante complicanze acute o croniche



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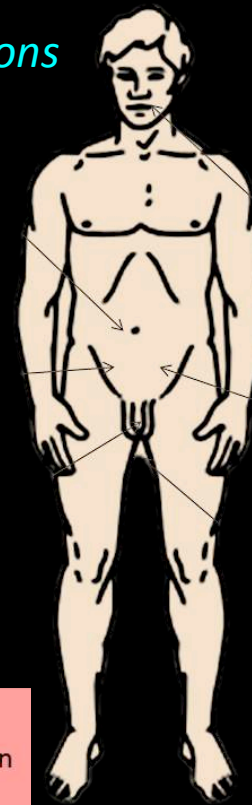
LA MALATTIA DIVERTICOLARE



Malattia diverticolare:

Termine che implica la presenza di sintomi o complicanze correlate alla presenza di diverticoli

Clinical Manifestations



Generalised tenderness

Onset of pain usually several days prior admission
Similar episodes experienced
Pyrexia
Shock

Nausea and Vomiting

Lower right quadrant pain
Palpable

Lower left quadrant pain
Palpable

Dysuria
Frequency
Urgency

Constipation
Diarrhoea

Painless rectal bleeding
Intermittent passage of maroon or bright red blood

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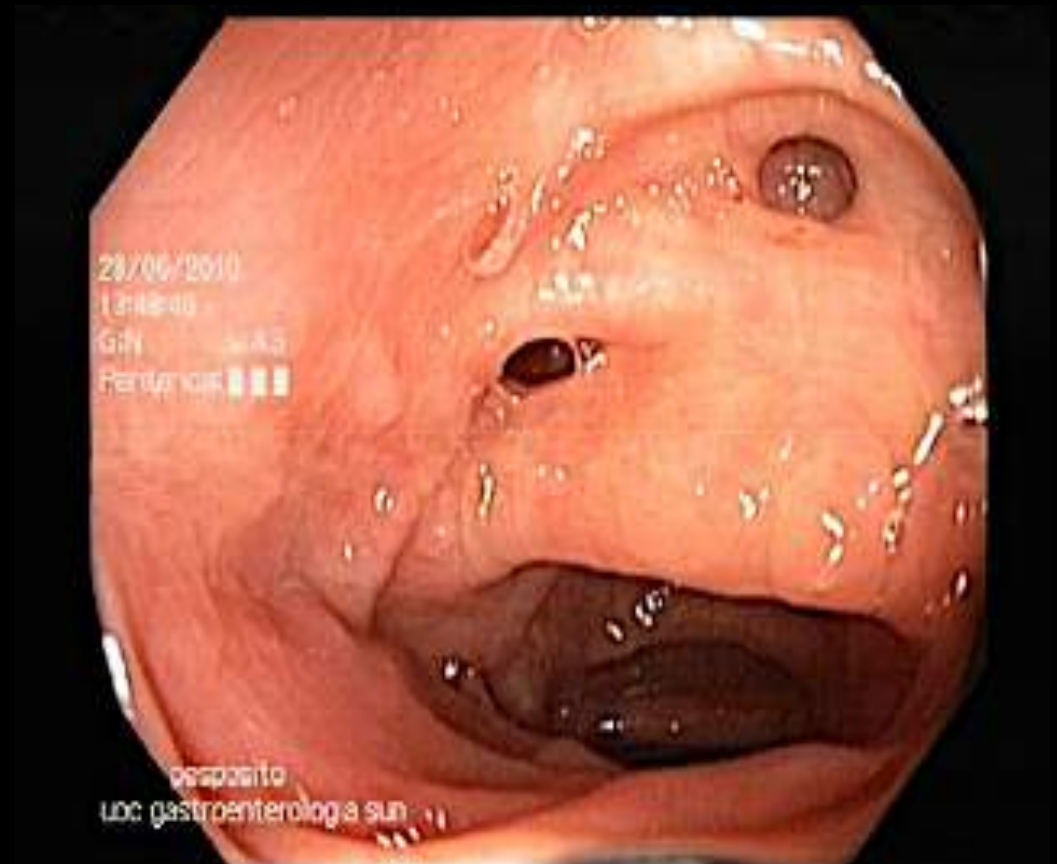
□ DEVELOPMENT OF
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LA MALATTIA DIVERTICOLARE



Il termine MALATTIA DIVERTICOLARE

sottende la presenza di una diverticolosi con implicazioni cliniche (da “lesione anatomica” a “malattia”)



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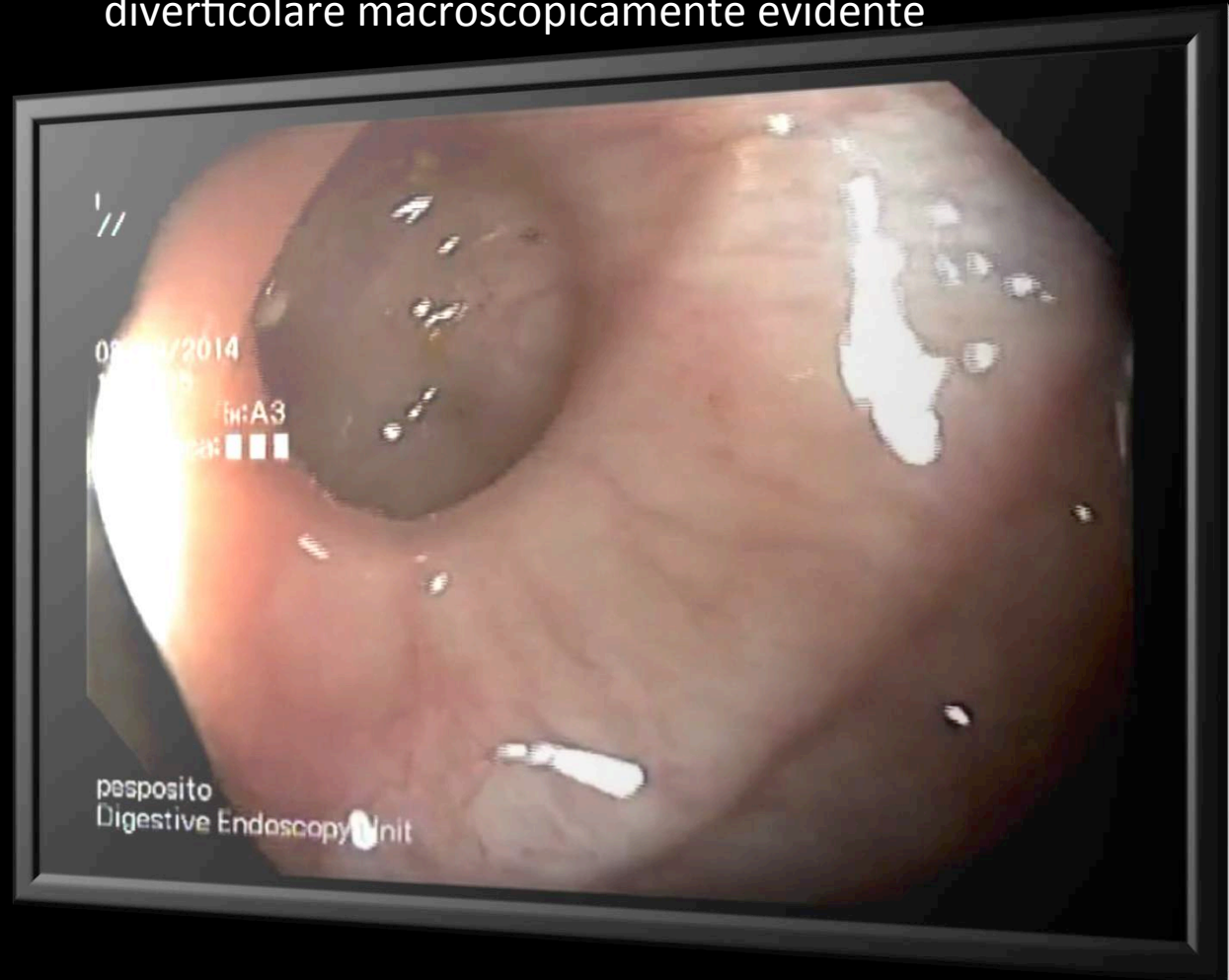
DEVELOPMENT OF
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LA MALATTIA DIVERTICOLARE



La MALATTIA DIVERTICOLARE SINTOMATICA NON COMPLICATA (SUDD) è caratterizzata

da sintomi addominali persistenti attribuiti ai diverticoli, in assenza di una infiammazione colica o diverticolare macroscopicamente evidente



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LA MALATTIA DIVERTICOLARE



La DIVERTICOLITE CRONICA RICORRENTE

è caratterizzata da attacchi ricorrenti di diverticolite acuta, in genere non complicata.



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pesposito gbiscaglia
UOC Gastroenterologia SUN

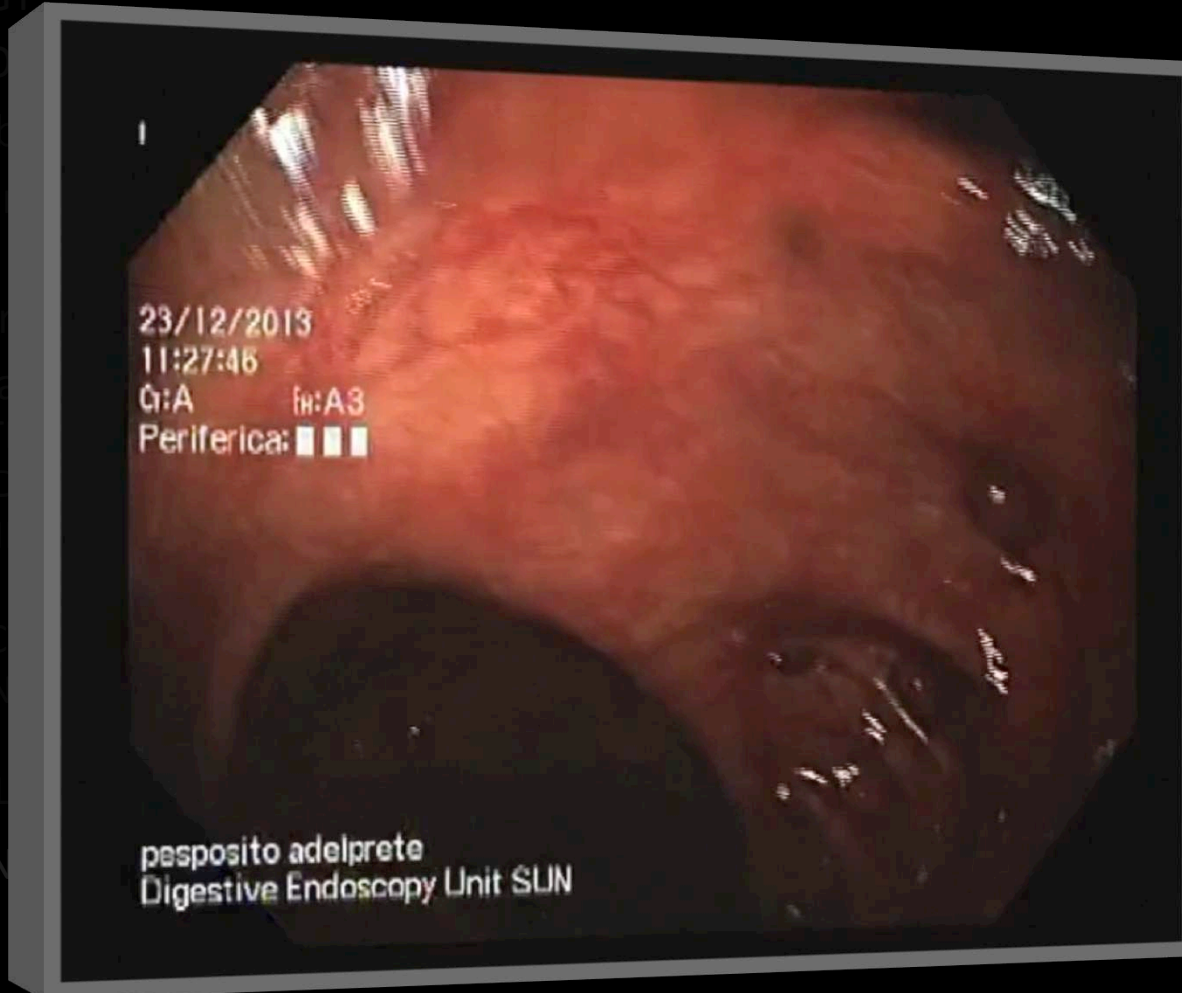
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La COLITE SEGMENTARIA ASSOCIATA AI DIVERTICOLI
(SCAD: Segmental Colitis Associated with Diverticulosis)

è una variante di diverticolite cronica con aspetti macroscopici in parte sovrapponibili ad una malattia infiammatoria cronica intestinale.



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 - ROLE OF COLONIC BACTERIA
- DEVELOPMENT AND PREVENTION
- SYMPTOMS

LA MALATTIA DIVERTICOLARE



Dimensione del problema

Prevalenza geografica



- maggiore nei Paesi occidentali ed industrializzati
- prevalenze più alte in Europa, Stati Uniti ed Australia
- incremento in Singapore ed Africa per urbanizzazione

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T.F.Ulmer et al.
Colonic wall changes in patients with diverticular disease – Is there a predisposition for a complicated course?
Intern J Surg V.12, Pag.426–431, 2014



M.R. Matrana, D.A. Margolin
Epidemiology and Pathophysiology of Diverticular Disease
Clin Colon Rectal Surg V. 22, N. 3, 2009

LA MALATTIA DIVERTICOLARE



Dimensione del problema

Prevalenza per

Età

Sesso

Età 40-50: 5%

Età < 50: più comune negli uomini

Età 60-70: 30%

Età 50-70: lieve prevalenza nelle donne

Età > 80: 65%

Età > 70: più comune nelle donne



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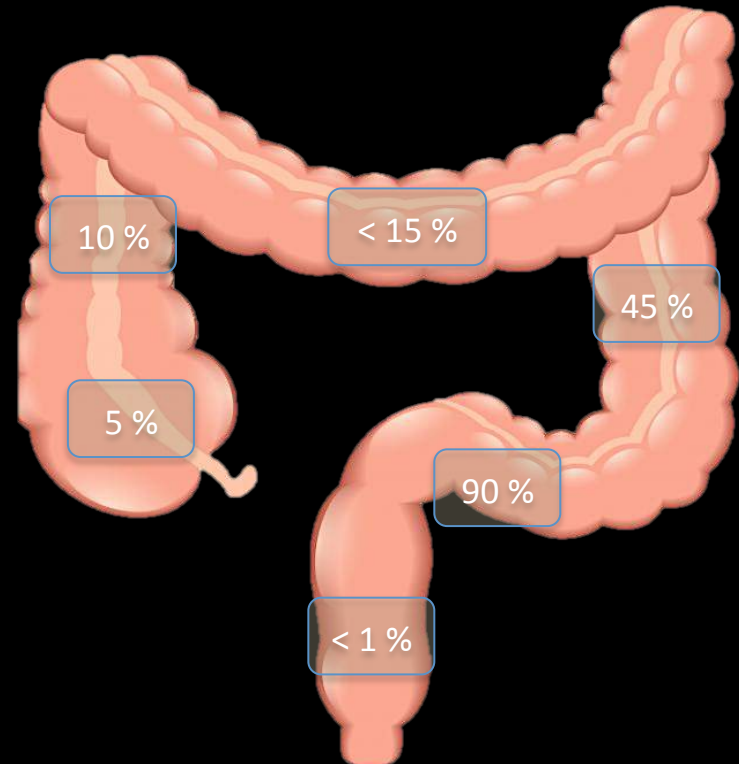
DEVELOPMENT OF SYMPTOMS

LA MALATTIA DIVERTICOLARE



Dimensione del problema

Prevalenza per sede colica



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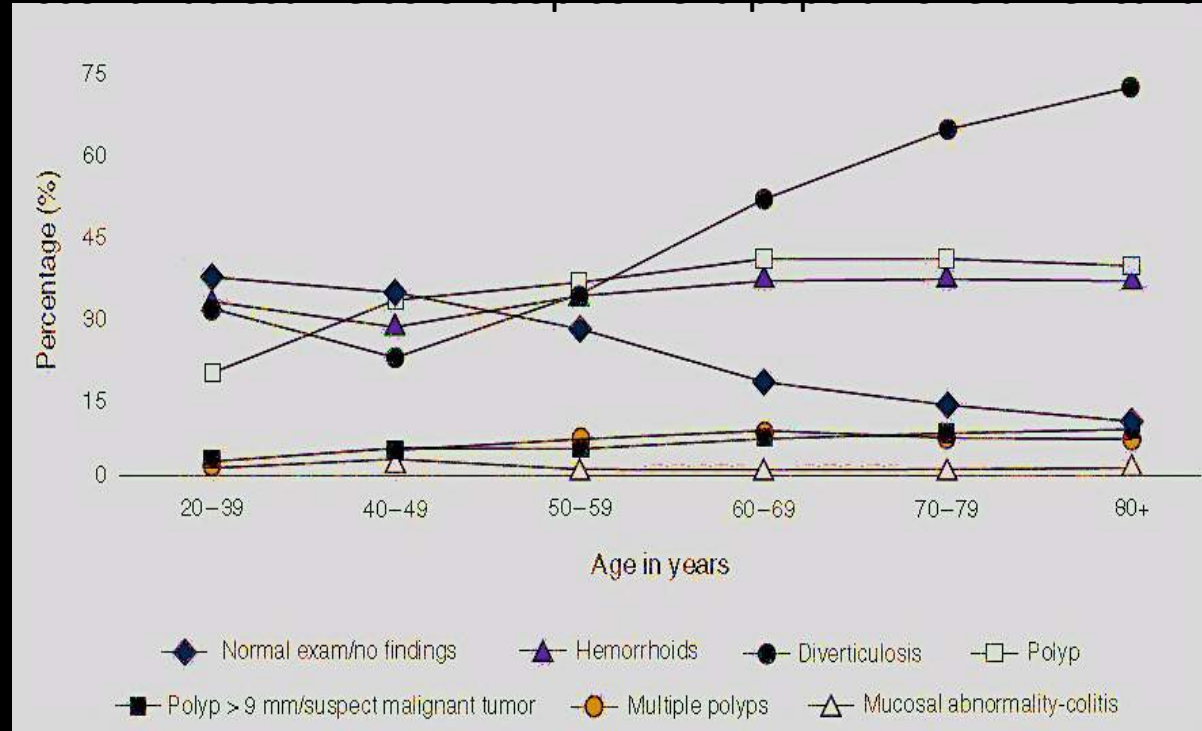
○ ROLE OF COLONIC FLORA

□ DEVELOPMENT OF
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LA MALATTIA DIVERTICOLARE



Dimensione del problema

5° malattia gastrointestinale più importante in termini di costi diretti ed indiretti

- 40% dei ricoveri per patologia colica
- circa 300.000 ricoveri/anno negli Stati Uniti
- 10-20% dei pazienti ospedalizzati va incontro a chirurgia
- circa 3.300 morti/ anno negli Stati Uniti



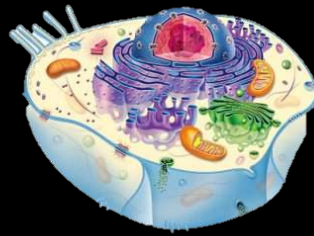
Weizman AV, et al.
Diverticular disease: epidemiology and management.
Can J Gastroenterol. 2011 Jul;25(7): 385-9.



M.R. Matrana, et al.
Epidemiology and Pathophysiology of Diverticular Disease
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LA MALATTIA DIVERTICOLARE



Alterazioni anatomiche:

- modificazioni del tessuto connettivo con aumento del deposito di elastina nelle tenie e modificazioni strutturali del collagene, simili a quelle caratteristiche dei processi di invecchiamento.

Structural Abnormalities

- Disordered Intestinal Motility
- Dietary Fiber Deficiencies
- Additional Factors
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J Whiteway, B C Morson
Elastosis in diverticular disease of the sigmoid colon.
Gut 1985;26:258-266



M.R. Matrana, et al.
Epidemiology and Pathophysiology of Diverticular Disease
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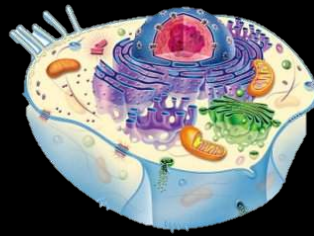


B.Gras, et al.
Motility disorders of the colon and rectum
Current Opinion in Gastroenterology, Vol 29 - Is 1 - p 66-71, 2013



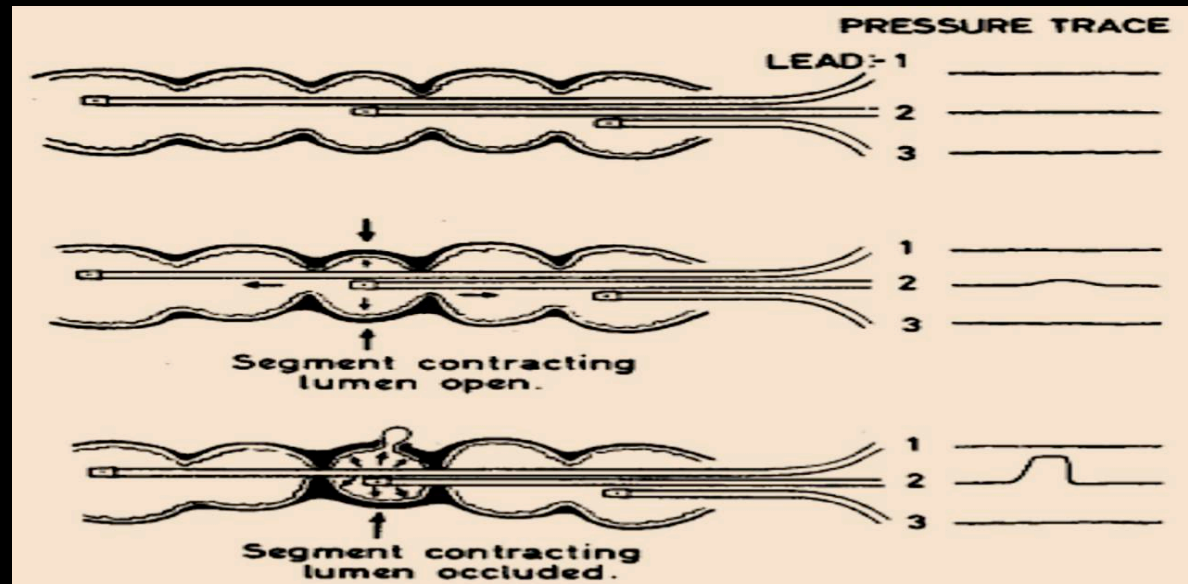
DEVELOPMENT OF SYMPTOMS

LA MALATTIA DIVERTICOLARE



Alterazioni motilità:

- ipercontrattilità, caratterizzata da un aumento del processo di segmentazione
- modificazioni del tessuto connettivo con aumento del deposito di elastina nelle tenie e modificazioni strutturali del collagene



Disordered Intestinal Motility

- Dietary Fiber Deficiencies
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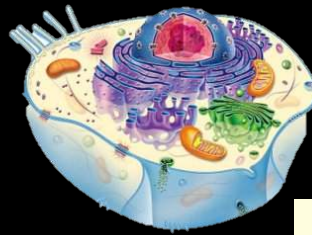
Arfwidsson S, et al.
Pathogenesis of multiple diverticula of the sigmoid colon in diverticular diseases.
Acta Chir Scand 1964, 342(Suppl):1-68



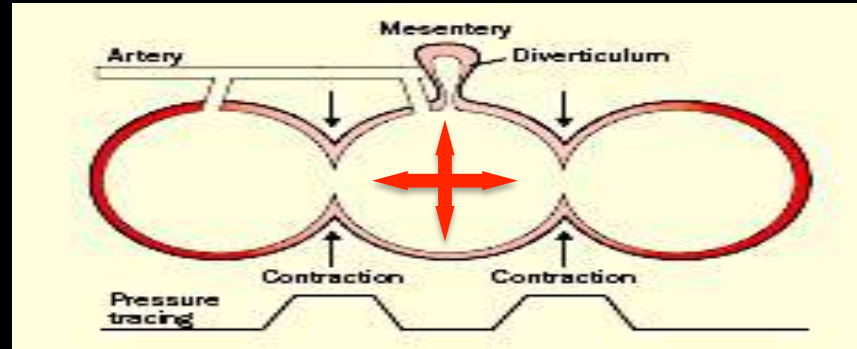
Painter NS, et al
Segmentation and the localization of intraluminal pressure in the human colon, with special reference to the pathogenesis of colonic diverticula. *Gastroenterology*. 1968 Apr;54(4):Suppl:778-80.

DEVELOPMENT OF SYMPTOMS

LA MALATTIA DIVERTICOLARE



Alterazioni motilità:



Summary of motility changes implicated in the pathogenesis of diverticular disease

Motility factors	Changes seen
Pressures	Increased intraluminal pressures demonstrated in DD colon Hypersegmentation
Colonic transit	Conflicting results
Myoelectrical activity	Increased and unaltered slow wave activity had been found the relevance of which is uncertain Increased basal motility Decreased frequency of mass movements and increased segmental activity in ageing leading to hypersegmentation Disordered 'colonic pacemaker' activity leading to increased activity in early DD and slower activity in late DD

Disordered Intestinal Motility

○ Dietary Fiber Deficiencies

○ Additional Factors

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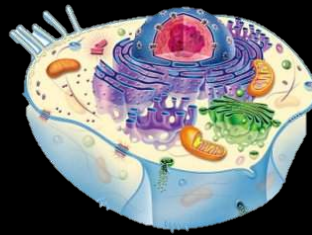


S. Jeyarajah
Review article: the pathogenesis of diverticular disease – current perspectives on motility and neurotransmitters
Aliment Pharmacol Ther 2011; 33: 789–800



B. Gras, et al.
Motility disorders of the colon and rectum
Current Opinion in Gastroenterology, Vol 29 - Is 1 - p 66–71, 2013

LA MALATTIA DIVERTICOLARE



Alterazioni motilità:

Characteristics and actions of neurotransmitters on colonic motility in diverticular disease.

Neurotransmitter	Characteristics and actions	Role in GI pathology	Avenues for further research
Serotonin	<p>Found in colonic mucosal enterochromaffin cells acting via 5-HT₃ and 4 receptors with SERT, a mucosal Na⁺ dependent reuptake mechanism</p> <p>Increased colonic intraluminal pressure leads to 5-HT release from enterochromaffin cells resulting in: increased contraction of smooth muscle cells</p> <p>intestinal ileal secretion and lack of jejunal absorption</p> <p>evokes fast excitatory postsynaptic potentials</p> <p>Serotonin agonists, accelerates colonic motility and antagonists inhibit colonic motility</p>	<p>IBS</p> <p>Decreased mucosal and post prandial release in IBS-Constipation</p> <p>DD</p> <p>Increased serotonin in enterochromaffin cells of DD resected colons</p>	<p>Increased DD studies to further clarify the role of serotonin including the action of 5-HT modulation on the clinical syndrome</p>
Acetylcholine	<p>Well-defined role in increasing bowel smooth muscle via postsynaptic muscarinic M3 receptors</p>	<p>DD</p> <p>Decreased density in old age</p> <p>Increased low frequency uncoordinated muscle contraction when stimulated by exogenous Ach</p> <p>Increased number and sensitivity of M3 receptors</p>	<p>Therapeutic modulation of Ach</p>
Nitrous oxide	<p>NO released by NANC inhibitory nerves in the myenteric plexus leading to colonic relaxation</p> <p>NO also modulates Ach through guanylyl cyclase and c-GMP</p>	<p>DD</p> <p>Decreased activity of NANC</p> <p>Decreased NO mediation on NANC</p>	<p>Increased clarity on the role of NO in colon and other GI pathology</p>
Vasoactive intestinal polypeptide	<p>Found in the myenteric plexus</p> <p>Appears to have an inhibitory role in peristalsis</p>	<p>Idiopathic Constipation</p> <p>Decreased concentration of VIP resulting in hypersegmentation and propulsion</p> <p>DD</p> <p>Increased VIP seen in myenteric plexus of DD colon</p>	<p>Increased clarity on the role of VIP and other neuropeptides in the human colon and in GI pathology</p>

Disordered Intestinal Motility

Structural Abnormalities

Dietary Fiber Deficiencies

Additional Factors

INFLAMMATION

NONSTEROIDAL

ANTIINFLAMMATORY DRUGS

SMOKING

PHYSICAL ACTIVITY/OBESITY

CAFFEINE AND ALCOHOL

INGESTION

ROLE OF COLONIC FLORA

DEVELOPMENT OF

SYMPTOMS

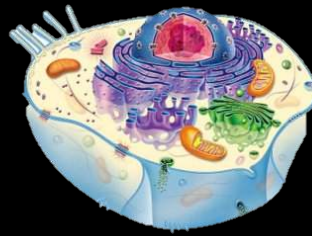


S. Jeyarajah
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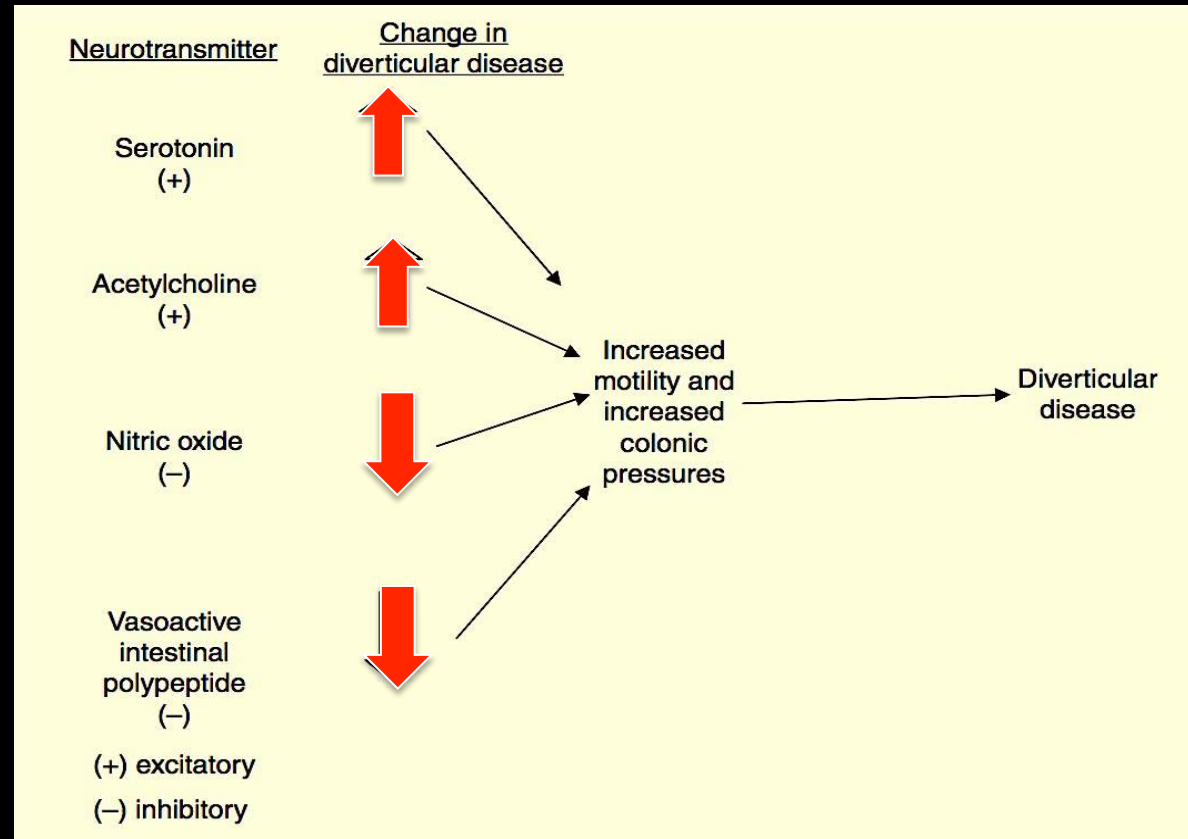
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LA MALATTIA DIVERTICOLARE



Alterazioni motilità:

Characteristics and actions of neurotransmitters on colonic motility in diverticular disease.



PATHOPHYSIOLOGY

Structural Abnormalities

Disordered Intestinal Motility

Dietary Fiber Deficiencies

Additional Factors

INFLAMMATION

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LA MALATTIA DIVERTICOLARE



Fattori dietetico/ ambientali

HISTORY

TERMINOLOGY

TAXONOMY

EPIDEMIOLOGY

PATHOPHYSIOLOGY

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Dietary Fiber Deficiencies

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ROLE OF COLONIC FLORA

DEVELOPMENT OF SYMPTOMS

December 2013

DIVERTICULOSIS: REPAINTING THE PICTURE 1629

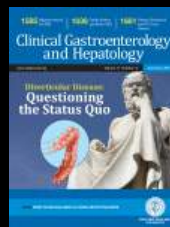
CLINICAL GASTROENTEROLOGY AND HEPATOLOGY 2013;11:1628-1630

Table 1. Overview of Studies Examining Dietary Fiber in the Prevention or Management of Diverticular Disease

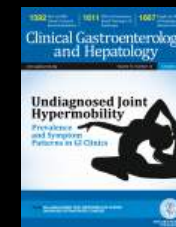
Study	No. of subjects	Design	Intervention	Outcome
Asymptomatic				
Peery et al, ²⁶ 2012	2104 (878) ^a	Cross-sectional	Dietary history taken	High-fiber diet and increased frequency of bowel movements are associated with diverticular disease
Song et al, ²⁷ 2010	848 (103) ^a	Cross-sectional	Dietary history	Diverticulosis not associated with fiber intake
Lin et al, ²⁸ 2000	191 (85) ^a	Case-control	Dietary history	Right-sided diverticulosis is associated strongly with meat intake but no effect of fiber
Gear et al, ⁵ 1979	320 (95) ^a	Case-control	Vegetarians vs nonvegetarians	Vegetarians had lower rates of diverticular disease; among meat eaters, those with the lowest fiber intake had the highest rates of diverticulosis
Symptomatic				
Lahner, ³⁰ 2012	55	RCT	High-fiber diet vs high fiber plus probiotic	Abdominal pain symptoms decreased by two-thirds in both groups
Aldoori et al, ³¹ 1998	43,881 (385) ^a	Prospective cohort	Dietary history recorded	Fibre intake was associated inversely with risk of symptomatic diverticular disease
Smits et al, ³² 1990	43	RCT	Fiber vs lactulose	Pain and symptoms improved in both groups
Manousos et al, ³³ 1985	210 (100) ^a	Case-control	Dietary history	Those who regularly consumed vegetables were 50 times less likely to have diverticular disease in comparison with those who regularly consumed meat
Ornstein et al, ³⁴ 1981	58	RCT	Fiber vs placebo	Improved constipation symptoms only, no change in pain
Eastwood et al, ³⁵ 1978	31	Prospective interventional	Bran vs ispaghula vs lactulose	All interventions improved symptoms
Hodgson, ³⁶ 1977	30	RCT	Fiber vs placebo	Improvement in symptom scores with fiber compared with placebo
Brodrribb, ³⁷ 1977	18	RCT	Fiber vs placebo	Improvement in symptoms with fiber
Taylor and Duthie, ³⁸ 1976	20	RCT	High-fiber diet vs laxative and antispasmodic vs bran	Bran most effective in improving symptoms
Plumley and Francis, ³⁹ 1973	48	Prospective interventional	High-fiber crisp bread	70% of patients symptoms were controlled with high fiber
Painter et al, ⁴⁰ 1972	70	Prospective interventional	High residue, low sugar + bran diet	88% of symptoms relieved or resolved
Complicated				
Crowe et al, ⁶ 2011	47,033 (812) ^a	Prospective cohort	Recorded dietary fiber levels	Fiber intake is associated with a decreased risk of hospitalization for diverticular disease
Colechia et al, ⁴¹ 2007	307	RCT	High fiber + rifaximin + high fiber alone	Both groups showed improvement with an additional benefit from rifaximin
Leahy et al, ⁴² 1985	56	Retrospective cohort	Dietary history recorded	Patients with diverticular disease on a high-fiber diet were less likely to develop diverticulitis
Hyland and Taylor, ⁴³ 1980	100	Retrospective cohort	High-fiber diet	91% of patients on a high-fiber diet were symptom-free at 5 years

RCT, randomized controlled trial.

^aNumber of subjects are represented as cases with controls in parentheses.



A.F. Peery et al.
 Diverticular Disease:
 Reconsidering Conventional
 Wisdom
 Clinical Gastroenterology and
 Hepatology
 2013;11:1532-1537



R.E. Burgell,
 Pathogenesis of Colonic
 Diverticulosis: Repainting
 the Picture
 Clinical Gastroenterology
 and Hepatology
 Vol 11, Is 12, Pag 1628-
 1630, 2013

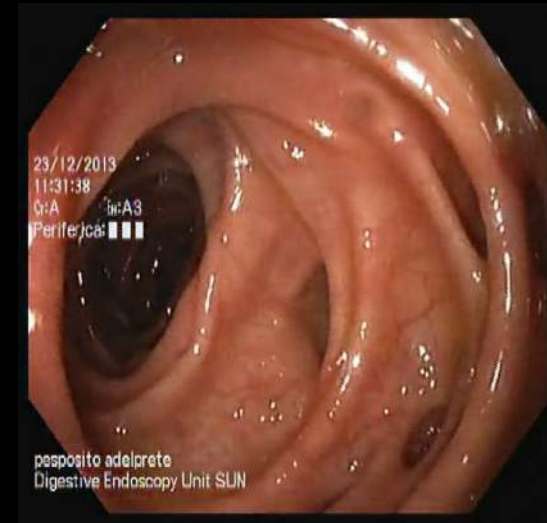
LA MALATTIA DIVERTICOLARE



Fattori dietetico/ ambientali

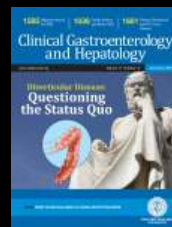
..... l'aumento della massa fecale conseguente ad un apporto elevato di fibre determina una distensione del lume colico, con conseguente minore aumento della pressione intraluminal e pertanto minore rischio di pulsione.

L'ipotesi è supportata dal fatto che la zona più frequentemente interessata dai diverticoli nella popolazione occidentale sia il sigma, che presenta tipicamente un calibro più ridotto rispetto agli altri segmenti colici.

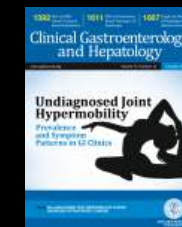


◉ Dietary Fiber Deficiencies

- ◉ Structural Abnormalities
- ◉ Disordered Intestinal Motility
- ◉ Additional Factors
 - ◉ INFLAMMATION
 - ◉ NONSTEROIDAL ANTIINFLAMMATORY DRUGS
 - ◉ SMOKING
 - ◉ PHYSICAL ACTIVITY/OBESITY
 - ◉ CAFFEINE AND ALCOHOL INGESTION
 - ◉ ROLE OF COLONIC FLORA



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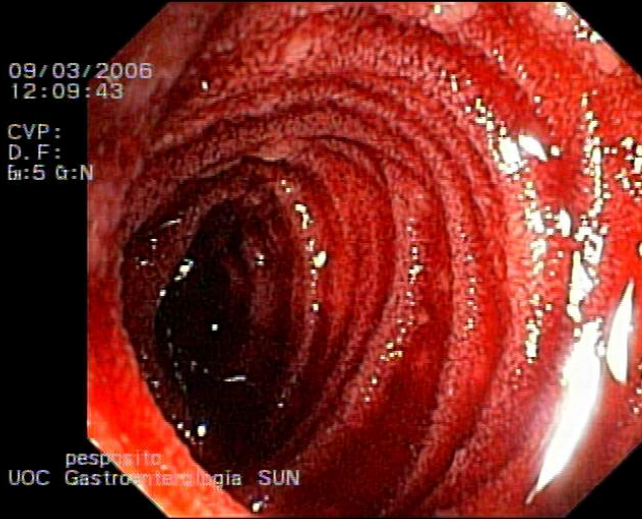
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Vol 11, Is 12, Pag 1628–
1630, 2013

◉ DEVELOPMENT OF SYMPTOMS

LA MALATTIA DIVERTICOLARE



FANS



I Farmaci Antinfiammatori Non Steroidei (FANS) sono associati a complicanze gastrointestinali, in particolare emorragie nel tratto gastrointestinale superiore. Gli studi suggeriscono che i FANS sono anche collegati con lo sviluppo della malattia diverticolare e con complicanze della malattia diverticolare.

“.....Studies suggest:

- ✓ NSAIDs are also linked with the development of diverticular disease and with its complications of diverticular
- ✓ NSAIDs used in patients with complicated diverticular disease is nearly double the rate of NSAID use in patients with normal, healthy colons
- ✓ NSAIDs use increase risk of diverticular hemorrhage.....”

Additional Factors

- INFLAMMATION
- NONSTEROIDAL ANTIINFLAMMATORY DRUGS
- SMOKING
- PHYSICAL ACTIVITY/OBESITY
- CAFFEINE AND ALCOHOL INGESTION
- ROLE OF COLONIC FLORA
- DEVELOPMENT OF SYMPTOMS



L.L. Strate et al.
Use of Aspirin or Nonsteroidal Anti-inflammatory Drugs Increases Risk for Diverticulitis and Diverticular Bleeding
Gastroenterology
Volume 140, Issue 5,
Pages 1427–1433, May 2011



C. L. Kvasnovsky et al.
Increased diverticular complications with nonsteroidal anti-inflammatory drugs and other medications: a systematic review and meta-analysis
Colorectal Disease
Volume 16, Issue 6, pag O189–O196, June 2014

LA MALATTIA DIVERTICOLARE



Il Fumo

“.....However, it has been suggested that smoking may increase the risk of complications of diverticular disease.

Authors published data in which 53% of all patients with complicated diverticular disease smoked, whereas only 29% of patients with uncomplicated disease smoked.

“.....Recent studies have failed to show a link between smoking and diverticular bleeding.....”



Turunen P. et al.
Smoking increases the incidence of complicated diverticular disease of the sigmoid colon.
Scand J Surg. 2010;99(1):14-7.



B.H.A. von Rahden, et al.
Colonic Diverticulosis and its Complications: Pathogenesis, Classification and Clinical Implications
Zentralbl Chir 2013; 138(S 02)

□ HISTORY

□ TERMINOLOGY

□ TAXONOMY

□ EPIDEMIOLOGY

□ PATHOPHYSIOLOGY

○ Structural Abnormalities

○ Disordered Intestinal Motility

○ Dietary Fiber Deficiencies

○ Additional Factors

○ INFLAMMATION

○ NONSTEROIDAL

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○ CAFFEINE AND ALCOHOL INGESTION

○ ROLE OF COLONIC FLORA

□ DEVELOPMENT OF SYMPTOMS

LA MALATTIA DIVERTICOLARE



Attività Fisica ed Obesità

□ HISTORY

□ TERMINOLOGY

□ TAXONOMY

□ EPIDEMIOLOGY

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○ ROLE OF COLONIC FLORA

□ DEVELOPMENT OF SYMPTOMS

“.....Aldoori and colleagues examined a prospective cohort of 47,678 American men, 40 to 75 years of age for a 4-year period and concluded that physical activity is inversely related to the development of diverticular disease, even when other factors such as fiber intake are controlled.....”

“.....Strate et al followed 47,228 male health professionals between the ages of 40 to 75 years old and found that obesity increases the risks of diverticulitis and diverticular bleeding significantly.....”



Kopylov U, et al.
Obesity, Metabolic Syndrome and the Risk of Development of Colonic Diverticulosis
Digestion 2012;86:201–205



Strate L.L. , et al.
Lifestyle Factors and the Course of Diverticular Disease
Dig Dis 2012;30:35–45

LA MALATTIA DIVERTICOLARE



Caffè & Alcool

“.....Because caffeine stimulates small bowel secretions and may affect colonic transit time, it has been suggested to play a role in the development of diverticular disease.

A link between alcohol and diverticula has also been proposed.....”

“.....In a prospective cohort study of 47,678 American men, Authors failed to show a link between either caffeine use or alcohol ingestion and diverticular disease..... Further studies are needed to investigate this association and its putative pathophysiological mechanisms.....”

□ HISTORY

□ TERMINOLOGY

□ TAXONOMY

□ EPIDEMIOLOGY

□ PATHOPHYSIOLOGY

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○ ROLE OF COLONIC FLORA

□ DEVELOPMENT OF SYMPTOMS

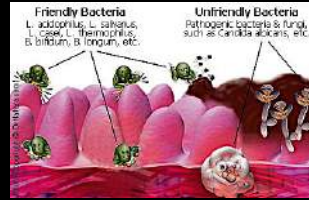


Strate L.L. , et al.
Lifestyle Factors and the Course of Diverticular Disease
Dig Dis 2012;30:35–45



Sharara AI, et al.
Alcohol consumption is a risk factor for colonic diverticulosis.
J Clin Gastroenterol. 2013, May-Jun;47(5)

LA MALATTIA DIVERTICOLARE



Colon & Microflora

“.....Alterations in peri-diverticular bacterial flora are thought to play a role in the pathogenesis of diverticular inflammation.....”

“.....Recently, the role microflora plays in the development and progression of diverticular disease has been the topic of debate. It has been suggested that altered microflora may predispose patients to micro-perforation and low-level inflammation by impairing mucosal barrier function and up-regulating inflammatory cytokine release.....”

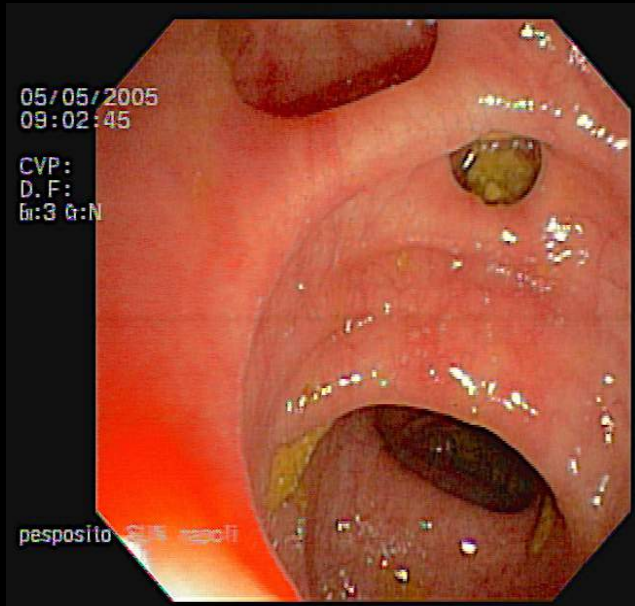
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□ TERMINOLOGY

□ TAXONOMY

□ EPIDEMIOLOGY

□ PATHOPHYSIOLOGY

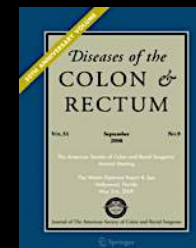


○ ROLE OF COLONIC FLORA

□ DEVELOPMENT OF SYMPTOMS



Sheth A. et al.
Probiotics and Diverticular Disease
Nutr Clin Pract Feb-Mar
2009 24: 41-44,



Daniels L. et al.
A hypothesis: important role for gut microbiota in the etiopathogenesis of diverticular disease.
Dis Colon Rectum. 2014 Apr; 57(4):539-43.

LA MALATTIA DIVERTICOLARE

PRESENTAZIONE CLINICA



HISTORY

Diverticolite acuta: diagnosi differenziale

- Appendicite acuta
- PID (pelviperitonite)
- Malattia infiammatoria intestinale
- Colite ischemica
- Neoplasia colica (\pm pseudotumor infiammatorio)
- Cisti ovarica complicata
- Gravidanza ectopica
- Torsione tubarica
- Pielonefrite acuta

Sintomi e segni classici:

- Dolore, in genere al quadrante addominale inferiore sinistro con risentimento peritoneale
- Leucocitosi
- Elevazione PCR
- Febbre
- Nausea + vomito
- Diarrea episodica, chiusura dell'alvo alle feci, meteorismo
- Disuria

DEVELOPMENT OF SYMPTOMS

LA MALATTIA DIVERTICOLARE

DIAGNOSI



Criteri diagnostici CT:

- Ispezzimento parietale > 3mm (presente nel 96%)
- Imbibizione del grasso pericolico (95%)
- Ispezzimento fasciale (50%)
- Liquido libero (45%)
- Diverticolo infiammato (43%)

-----> Nonostante l'elevata sensibilità e specificità, il rischio di mis-diagnosi con lesione neoplastica non è trascurabile colonscopia a distanza 4-6 settimane indicata!

RMN addome:

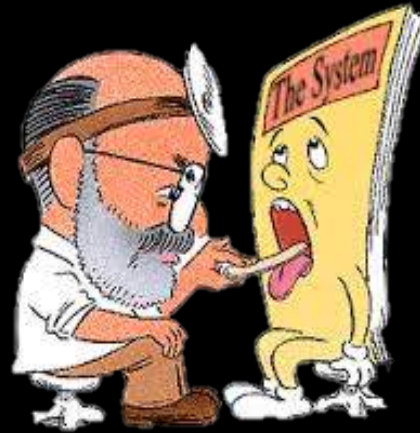
- Sensibilità 94%; Specificità 87%
- Non praticata nella valutazione in acuto



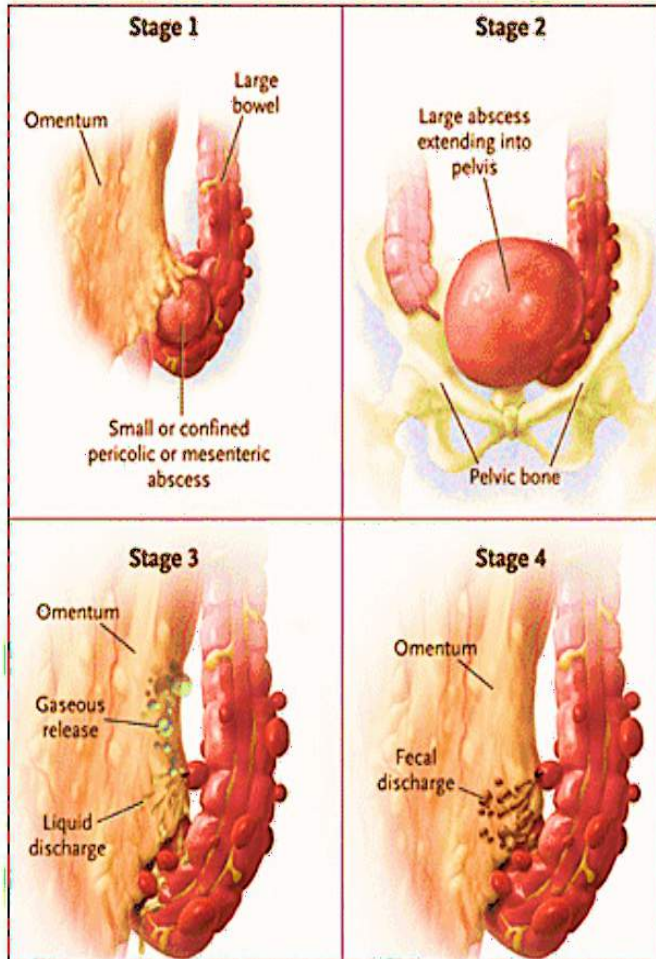
□ DIAGNOSI

LA MALATTIA DIVERTICOLARE

DIAGNOSI



Classificazione di Hinchey



0

Diverticolite lieve

Ia

Infiammazione pericolica, flemmone

Ib

Ascesso pericolico "confinato"

II

Ascesso pelvico intraddominale o retroperitoneale

II A – passibile di drenaggio

II B – complesso, con o senza fistola

III

Peritonite purulenta

IV

Peritonite fecale

DIAGNOSI

LA MALATTIA DIVERTICOLARE



TERAPIA MEDICA

- HISTORY
- TERMINOLOGY
- TAXONOMY
- EPIDEMIOLOGY

MALATTIA DIVERTICOLARE: TERAPIA FARMACOLOGICA

1. Rifaximina
2. Mesalazina

- Diverticolite acuta “non perforata”
 - Stadio 0-I → antibiotici
 - Stadio II → antibiotici + drenaggio
- Forme “lievi”:
 - ✓ antibiotici orali a largo spettro
 - ✓ dieta a basso contenuto di scorie
 - ✓ analgesici minori
- Forme “moderate-severe”:
 - ✓ ospedalizzazione (almeno 48-72h) bowel rest
 - ✓ idratazione e.v.
 - ✓ terapia antibiotica parenterale anti-dolorifici

- THERAPY

LA MALATTIA DIVERTICOLARE

TERAPIA CHIRURGICA

□ HISTORY



Intervento non giustificato in pazienti asintomatici o nella malattia diverticolare sintomatica non complicata



Chirurgia in elezione dovrebbe essere considerata dopo:

- 2 episodi documentati di diverticolite acuta non complicata
- un singolo episodio di diverticolite acuta complicata (es. ascesso, fistola)
- un singolo episodio in pazienti immunocompromessi o che richiedono una terapia immunosoppressiva cronica e nei pazienti di giovane età

□ THERAPY