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pcf3 - Survey of Specialists in Palliative Drugs and Symptom Relief in Palliative Care

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Abstract

A quarter of all prescriptions in palliative medicine are for licensed drugs that are used for unlicensed indications or that are given by an unlicensed route. Such prescriptions may affect two thirds of inpatients in specialist palliative care units.1,2 Doctors have been recommended to record in the patient's notes the reason for prescribing outside the licence; to explain, where possible, the position to the patient (and carers, if appropriate) in sufficient detail to allow informed consent to be given; and to inform other professionals involved in the care of the patient of such prescribing, so that misunderstandings are avoided.3 Given the widespread use of drugs outside their licence in palliative care, strict adherence to these recommendations may be impractical. In view of the implications of these recommendations for doctors in palliative medicine and other doctors they advise, a position statement endorsed by the specialty would be helpful. We undertook a survey of current practice to inform the debate.

INTRODUCTION

All 182 palliative care services in the United Kingdom with a medical director or consultant were asked to complete anonymously a postal questionnaire in October 1999 (figure). Informed consent was defined thus: "Patients have been given the information they asked for or need about their treatment in a way they can understand so that whenever possible the patients have understood the nature, purpose and material risks of what is proposed and consent to it before you provide treatment."

One hundred and seventeen questionnaires (64%) were returned. When unlicensed prescribing was limited to consultants, this was generally in the context of a consultant based service. No respondents always obtained written consent to unlicensed use, and only a minority (<5%) always obtained verbal consent, documented unlicensed use in the patient's notes, or informed other professionals of it. The drugs for which these recommended practices were sometimes carried out were ketamine (58 reports), octreotide (19), ketorolac (15), midazolam (10), gabapentin (10), and amitriptylline (10). The only unlicensed drug use for which three of the services sometimes obtained written consent was gabapentin for neuropathic pain—an indication for which it became licensed in 2000.

Invited comments covered three main themes. Firstly, respondents said that, given the prevalence of unlicensed use, it is impractical to obtain written consent routinely—and that discussion of unlicensed use could create unnecessary anxiety for the patient or carer. Secondly, some respondents sought consent only when prescribing drugs whose unlicensed use was not established in the specialty. Finally, other respondents made no distinction between licensed and unlicensed use and did not obtain verbal informed consent for use of any drug.

Comment

When prescribing drugs for use outside their licence, most specialists in palliative medicine do not routinely obtain verbal or written informed consent, document the reason for unlicensed use in the patient's notes, or inform other involved professionals of unlicensed use. When they do obtain consent, it is likely to be for the use of less established drugs and to be verbal rather than written. Strict adherence to the recommendations is not welcomed by palliative care specialists because of the number of drugs involved and the burden to patients and carers.

This view is shared by the Royal College of Paediatrics and Child Health-the use of drugs outside their licence is also common in paediatrics—which has stated that in general it is not necessary to obtain the explicit consent of parents, carers, or patients for unlicensed use. The royal college has also stated that NHS trusts and health authorities should support therapeutic practices that are advocated by a respectable, responsible body of professionals.4,5

	Yes	No	
1. Does your service operate a policy on providing information to patients and their carers about the prescribing of licensed drugs for unlicensed uses/routes?	2 (2)	113 (97)	
If 'yes' please provide any details/documentation of any policy your service is operating			
2. Do you limit the prescribing of drugs in this way to consultants only?	20 (17)	93 (79)	
	Always	Sometimes	Never
3. Do you obtain verbal consent from the patient/carers?	5 (4)	62 (53)	45 (38)
4. Do you obtain written informed consent from the patient/carers?	0 (0)	4 (3)	109 (93)
5. Do you document in the notes when you are using drugs outside of their licence and the reasons for this?	6 (5)	48 (41)	58 (50)
6. Do you inform other professionals when using such medication?	7 (3)	80 (68)	25 (21)
If you have answered 'always' to any of the above please provide details/documentation of any policy your service is operating If you have answered 'sometimes' to any of the above please answer the following questions			
	No of times		
7. How often have you obtained verbal or written informed consent from patients/carers or documented in the notes the reasons for using licensed drugs for unlicensed uses/routes in the past six months?	0 1-3 4-6 7-10 >10	16 (20) 41 (50) 14 (17) 1 (1) 10 (12)	
8. Please list the particular drugs, their use and route of administration			
9. Please add any comments that you may have about the obtaining of informed consent from patients/carers and documenting the use of licensed drugs for unlicensed purposes/routes in relation to your palliative medicine practice			

Figure: Questionnaire on unlicensed use of drugs that was sent to palliative medicine specialists, with numbers (percentages) of responses (n=117) to multiple choice questions

The continuing physical, emotional, and cognitive development in children sets them apart from adults. It influences all aspects of their care, including pharmacological treatment, their understanding of their disease, their communication skills, and their level of dependence.

Parents are usually the main carers for children, with care taking place at home. They and the child's siblings will need support throughout the child's illness and their bereavement.

Often, many professional and voluntary agencies are involved, as skill in different aspects of paediatrics and palliative care is needed. Care in hospital, care at home, respite care, and education all need to be coordinated, and community paediatric nurses often do this as key workers.

Many children have prolonged illnesses; an integrated approach is then required, with a gradual change in the emphasis of care between treatments aiming to cure or prolong life and palliative care, rather than one having rigid boundaries.

Although palliative care for children is a relatively young specialty, its importance is being increasingly recognised. The Royal College of Paediatrics and Child Health has established a special interest group to promote the best possible care and develop medical training. Similar commitment exists in nursing. The voluntary sector contributes heavily, particularly with children's hospices, and government help has come through the "Diana nurses" project.

Life threatening conditions for which treatment is available but may fail—for example, cancer

Conditions in which premature death is expected but long periods of intensive treatment to prolong good quality life are anticipated—for example, cystic fibrosis, HIV infection/AIDS

Progressive conditions that may extend over many years and for which no curative treatment is available—for example, Batten disease, mucopolysaccharidoses

Conditions with severe disability that, although not progressive, lead to extreme vulnerability and in which premature death is likely—for example, cerebral palsy.

Children than adults die, they also require palliative care. I am writing on behalf of the Palliative Care Working Group of the Royal College of Paediatrics and Child Health, which wants to alert readers to some of the special needs of children.1-2,1-3

The illnesses from which children die are different from those from which adults die, and paediatric palliative care has emphasised the importance of developing services for children other than just those with cancer.

of both species showed similar responses. At a concentration of 0.02 mM Ag(I), most cells of C. maltosa lost their membrane potential within 2 min, whereas 0.02 mM Hg(II) had a negligible effect on membrane potential even at 15 min. The percentage of depolarized cells increased gradually after 15 min. At concentrations below 0.02 mM, the percentage of depolarized cells in Ag(I) reached a plateau (84%) within 15 min, but the percentage of depolarized cells in Hg(II) continued to increase with time (Fig. (Fig.2B).2B).

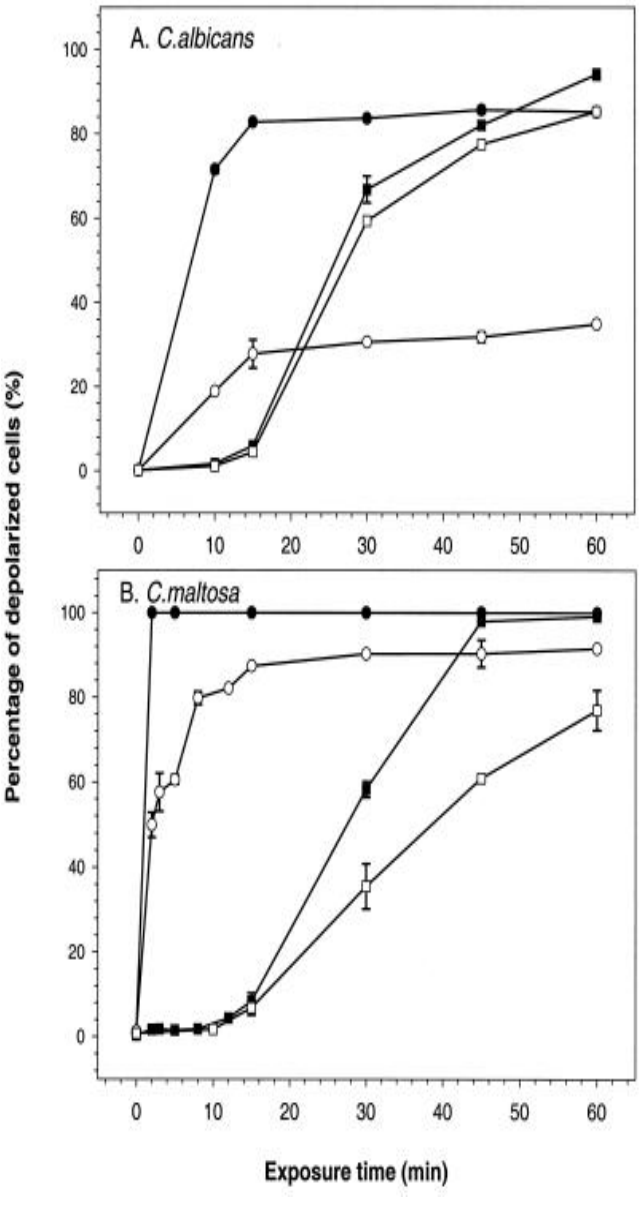

FIG. 2: (A) Depolarization with time of cells of C. albicans in 0.002 mM Ag(I) (●, 3.65 × 106 cells ml−1; ○, 7.38 × 106 cells ml−1) and 0.016 mM Hg(II) (▪, 3.65 × 106 cells ml−1; □, 7.38 × 106 cells ml−1). (B) Depolarization of C. maltosa (2.33 × 106 cells ml−1) in Ag(I) (●, 0.020 mM; ○, 0.004 mM) and Hg(II) (▪, 0.020 mM; □, 0.010 mM). Each data point represents the average obtained from duplicate independent assays.

asterisks, MMP-9; open circles, MMP-13. Inhibition is expressed as percentage activity, when 0–11μM calprotectin is present. Each point represents the mean of duplicates.

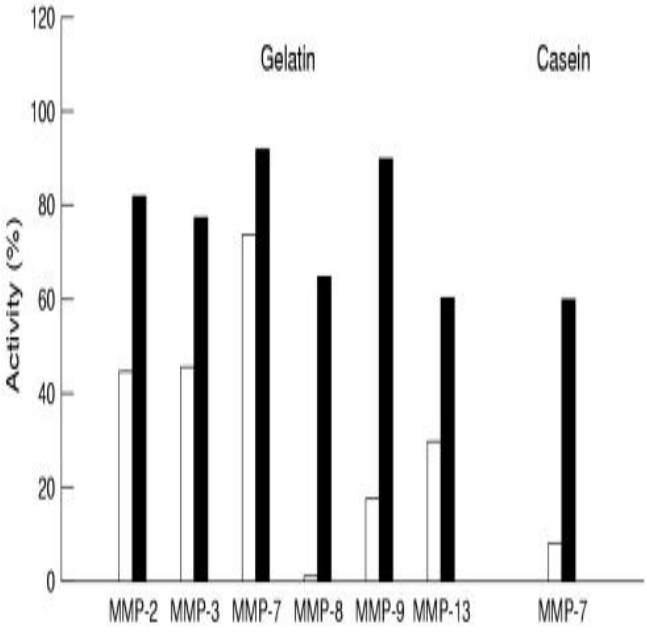

Figure 3: Relative activities of metalloproteinases in the gelatinolytic and caseinolytic microwell assays, when incubated with 11μM calprotectin and 1μM (open bars) or 100μM (closed bars) zinc. The figures are expressed as percentage activity compared with activity without calprotectin.

Discussion

Our results show that modifications of the method described by Rucklidge and Milne allow the quantitative determination of MMP activities. This method avoids the use of radioactive isotopes and different substrates can be used. Furthermore, the assay system is simple and sensitive, allowing detection of 3 ng/ml or less. However, this method is more time consuming than a recently described method using biotinylated gelatin.14 Another aspect is that some substrates, such as collagen, may be altered and less available for enzymatic degradation as a result of the coating process or exposure to paraformaldehyde. For instance, collagen type 1 (from calf skin, Fluka, Buchs, Switzerland) was almost completely converted into gelatin, which was shown by the fact that it was rapidly degraded by trypsin (data not shown).

MMPs are activators of a broad range of cytokines, including interleukin 1, tumour necrosis factor α, Fas ligand, and transforming growth factor β,15–19 and thereby play important roles in regulating processes such as acute and chronic inflammation, tumour cell invasion, apoptosis, and macrophage chemotaxis. Calprotectin may affect various pathophysiological processes by competing with MMPs for zinc. Our study revealed that calprot

ectin inhibits the activity of all the enzymes tested, and that this inhibition was overcome by the addition of zinc. A higher concentration of calprotectin was necessary to inhibit some metalloproteinases than others, regardless of the substrate. In the gelatinolytic assay, MMP-3, MMP-8, and MMP-13 needed a 200–700 times molar excess of calprotectin to give a 50% inhibition. By comparison, up to a 18 000 times molar excess was necessary to give a similar inhibition of MMP-2 and MMP-9.

These results suggest that MMPs have different affinities for zinc, and that calprotectin has an even lower affinity, because a large excess was necessary for inhibition.

Structurally, MMP-2, MMP-3, MMP-8, MMP-9, and MMP-13 have one catalytic domain containing the zinc binding site. In addition, MMP-2 and MMP-9 have one zinc binding site closer to the C-terminal, suggesting a higher capacity for binding of zinc. MMP-7, the smallest of the proteins, also has one catalytic domain.1 Nonetheless, a much higher concentration of calprotectin was needed to inhibit this enzyme than MMP-3, MMP-8, or MMP-13, which suggests that MMP-7 has a higher affinity constant for zinc.

The metalloproteinases are totally dependent on zinc for their enzymatic activities,1 and our results support the hypothesis that some biological effects of calprotectin are linked to its sequestration of zinc. Sohnle et al showed that calprotectin inhibits microbial activity via a zinc deprivation mechanism,8,20 and it has also been shown that the apoptosis inducing activities of calprotectin were inhibited by the addition of micromolar concentrations of zinc.21 The concentrations of calprotectin needed to inhibit the MMPs in vitro may be biologically relevant. During bacterial infections, up to 120 ng/µl has been found in plasma.4 The release of calprotectin from neutrophils in human peripheral blood may give a concentration of about 20 ng/µl plasma, based on a content of 5 pg calprotectin/cell,22 and 4 × 109 neutrophils/litre blood. Local accumulation of granulocytes corresponding to five times the normal may provide 5µM calprotectin, which would lower the activity of most of the enzymes by 50% or more, if their concentrations in vivo were similar to those used in vitro. The enormous numbers of leucocytes seen at sites of inflammation have the potential to provide several thousand times higher concentrations of calprotectin.

DISCUSSION

An apparent threshold level of Ag(I) reduced membrane potential and membrane integrity rapidly for the individual cells of C. albicans and C. maltosa, suggesting that a major target of silver is located in the cell membrane. The absence of such a threshold dose for Hg(II) suggested that the target molecules and their threshold levels of mercury were different from those of silver. Moreover, in Ag(I) solutions, cells lost recoverability at a rate similar to those for cell depolarization and membrane permeabilization, whereas in Hg(II) solutions, loss of cell recoverability preceded the loss of membrane potential and membrane integrity, especially for C. maltosa. C. albicans retained membrane integrity even after exposure to Hg(II) for 1 h and in this regard differed significantly from C. maltosa. A further distinction between the activities of the two ions was the fact that the uptake and binding of Ag(I) by C. maltosa were greater and more rapid than those of Hg(II).

Brown and Smith (4) showed by a cytochemical method that the Hg(II) accumulated by Cryptococcus albidus was present in various parts of the cell other than the cell wall and membranes. Passow and Rothstein (16) demonstrated that mercury ions caused irreversible membrane damage in S. cerevisiae, whereas Brunker (5) found that this metal inactivated the enzymes that are responsible for catabolic metabolism. These reports suggested that mercury ions might interact with a variety of reactive sites in both the cell membrane and intracellular targets. An interaction of Hg(II) with C. albicans and C. maltosa at multiple sites with disruption of vital cell processes might explain the observed loss of cell recoverability before the loss of membrane potential and membrane integrity. Ag(I) and Hg(II) may act similarly for both yeasts and possibly with different targets, but the more-rapid binding of Ag(I) may overshadow any threshold differences between membrane function and cell recoverability.

We recognize that chemical forms of a metal in solution, which regulate metal binding to the membrane and penetration into the cell, are difficult to identify and vary under different experimental conditions (6, 12). Nevertheless, relative metal toxicity may be assessed from the equivalent biologically active metal concentrations. We found that the percentage of depolarized cells of both species increased with increasing concentrations of metals and generated a sigmoidal dose-response relationship. These sigmoidal curves permitted an estimation of metal concentrations that remained in the supernatants.

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REFERENCES

1. Early Alzheimer's Disease: Patterns of Functional MRI Activation-The Neural Substrates of Semantic Memory Deficits. Am J Bra Dis and Tum. 2018; 1(1): 001-010.
2. H Chahal, S W D Souza, A J Barson and P Slater. How to develop human brain using magnesium of N-methyl-D-aspartate receptors, Am J Bra Dis and Tum. 2018; 1(1): 001-005.
3. F S LaBella, et al.Concepts and correlations related to general anaesthesia and cytochrome P450 oxygenases. Am J Anest and Pai med. 2018; 1(1): 01-05.
4. Hazim J Safi, et al. The long term method with the elephant trunk for the repair of aortic aneurysms. Am J Anest and Pai med. 2018; 1(1): 001-008.
5. Yoshitaka Fujii, et al. Diaphragmatic Fatigue is treated with Inhaled Aminophylline Therapy in an Experimental Canine procedure. Am J Anest and Pai med. 2018; 1(1): 001-003.
6. O Demirkiran, et al. Complications in patients with Crush syndrome after the Marmara earthquake. Am J Anest and Pai med. 2018; 1(1): 001-005.
7. Qi Wei, et al. Laparoscopic choledochotomy after Biliary drainage: Study. Am J Anest and Pai med. 2018; 1(1): 001-007.
8. Mark Palazzo, et al. Unilateral Babinski/Plantar Reflex - Acute Inflammatory Demyelinating Polyneuropathy. Am J Anest and Pai med. 2018; 2(1): 01-02.
9. Hakan Alfredson, et al. Achilles and patellar tendon operations performed in local anestesia, Am J Anest and Pai med. 2018; 1(1): 001-002.
10. Naemeh Nikvarz, et al. Evaluation The Analgesic Effect of Duloxtine Drug in Burn Pationts. Am J Anest and Pai med. 2019; 2(1): 01-07.
11. Chuandong Zheng, et al. Intravascular Plaque: Cause for Radial Arterial Catheterization Failure. Am J Anest and Pai med. 2019; 2(1): 01-05.
12. Laura Tyler Perryman, et al. Wireless Dorsal Root Ganglion Stimulation: An Introduction and Early Experience with the New Approach for Chronic Pain Management. Am J Anest and Pai med. 2019; 2(1): 01-04.
13. Lazraq Mohamed, et al. Pediatric Pre-Anesthesia Consultation: What are Parents Expectations?. Am J Anest and Pai med. 2019; 2(1): 01-02.
14. Alaa Ali M. Elzohry, et al. Safety and Efficacy of Intraperitoneal Irrigation of Levo-Bupivacaine plus Morphine in Patients Undergoing Major Abdominal Cancer Surgeries. Am J Anest and Pai med. 2019; 2(1): 01- 07.
15. Yıldız K, et al.Comparison between Anesthesia Methods In Orthopaedics Initiatives of Upper Extremity. Am J Anest and Pai med. 2019; 2(2): 01-03.
16. Jianming Liu, et al. The Analgesic Effects Nalbuphine Hydrochloride Combined With Sufentanil for Patients after Thoracoscopic Lobectomy. Am J Anest and Pai med. 2019; 2(2): 01-03.
17. Fudong Shi, et al. The Patient Controlled Intravenous Analgesia of Dezocine on the Elderly Patients After Orthopedic Surgery. Am J Anest and Pai med. 2019; 2(1): 01-04.
18. GE Meglia, et al. Investigation in blood Leukocytes and Neutrophils in Periparturient Dairy Cow. Sci J of Ani and Vet Sci. 2018; 1(1): 001-009.
19. G E Duhamel, et al.DNA Sequence Analysis of an Immunogenic Glucose-Galactose Mglb. Sci J of Ani and Vet Sci. 2018; 1(1): 001-009.
20. David G. White, et al. Chloramphenicol and Florfenicol Resistance in Escherichia Coli of Characterization . Sci J of Ani and Vet Sci. 2018; 1(1): 001-006.
21. N B Alhaji, et al. Anophthalmia and Choanal Atresia In Two Months Old Kid. Sci J of Ani and Vet Sci. 2018; 1(1): 001-004.
22. Christopher W Olsen, et al.Isolation and Characterization of H4N6 Avian and Influenza Viruses. Sci J of Ani and Vet Sci. 2018; 1(1): 001-0025.
23. Teresa Lopez-Arteaga, et al. Apathy as a Psychiatric Manifestation of Meningioma. Am J Bra Dis and Tum. 2018; 1(1): 001-004.
24. David R Murdoch, et al. The Use of Brain Natriuretic Peptide- Whole Blood can be Measured, Am J Bra Dis and Tum. 2018; 1(1): 001-003.
25. Stefan Brocke, et al. Antibodies to Integrin α4 and CD44, but not CD62L, Prevent CNS Inflammation and Experimental Encephalomyelitis by Blocking Secondary Leukocyte Recruitment. Am J Bra Dis and Tum. 2018; 1(1): 001-006.
26. Andrew J Saykin, et al. Early Alzheimer's Disease: Patterns of Functional MRI Activation-The Neural Substrates of Semantic Memory Deficits. Am J Bra Dis and Tum. 2018; 1(1): 001-010.
27. P Slater, et al.How to develop human brain using magnesium of N-methyl-D-aspartate receptors, Am J Bra Dis and Tum. 2018; 1(1): 001-005.
28. Clyde W Hodge, et al. The Paraventricular Nucleus Interactively Modulate Ethanol Consumption -Norepinephrine and Serotonin Receptors, Am J Bra Dis and Tum. 2018; 1(1): 001-005.
29. Paulo C Carvalho, et al. Bioinformatics grid application in simple - Squid. Sci J Biome and Biost. 2018; 1(1): 001-004.
30. Mahmoud A E Abdelrahman, et al. On The New Exact Solutions for the Nonlinear Models Arising In Plasma Physics. Sci J Biome and Biost. 2018; 1(1): 001-004.
31. Weicheng Shen, et al. Based on Personal Identification- Automated Biometrics. Sci J Biome and Biost. 2018; 1(1): 001-002.
32. V Prasathkumar, et al.Fingerprint Biometric System - Using of Personal Authentication. Sci J Biome and Biost. 2018; 1(1): 001-003.
33. SavitaChoudhary, et al. Software Development Environment : Design of Biometric Based Transaction System. Sci J Biome and Biost . 2018; 1(1): 001-003.
34. D J Lawrence, et al. Measuring the effectiveness in reliability and validity of a visual function outcomes instrument in cataract surgery. Sci J Biome and Biost. 2018; 1(1): 001-004.
35. Z Suvakovic, et al. Evaluation of early detection of gastric cancer requries more than gastroscopy. Anna of Can Ther and Phar. 2018; 1(1): 05.
36. Ho GY, et al. Informing and involving personalised computer based data for cancer patients. Anna of Can Ther and Phar. 2018; 1(1): 001-005.
37. Ray Jones, et al. Prostate Cancer Risk is associated with Polymorphism of Insulin gene. Anna of Can Ther and Phar. 2018; 1(1): 001-005.
38. : Jean-Pierre J. Issa, et al. Role of DNA Methylation in Tumor Suppressor Gene Silencing in Colorectal Cancer. Anna of Can Ther and Phar. 2018; 1(1): 001-008.
39. Jules J Berman, et al. Histological classification of tumour and molecular analysis meets Aristotle. Anna of Can Ther and Phar. 2018; 1(1): 001-005.
40. Kafil Akhtar, et al. Tuberculosis of the Tongue with Coexistent Squamous Cell Carcinoma: An Interesting Case Presentation, Anna of Can Ther and Phar. 2018; 1(1): 001-002.
41. Serafin Morales Murillo, et al. Vitamin D as A Prognostic Factor in Triple Negative Breast Cancer. Anna of Can Ther and Phar. 2019; 2(1): 01-08.
42. Ahmet Fuat, et al. A Qualitative Study of Accurate Diagnosis and Effective Management of Heart Failure in Primary Care. Am J of Card and Cardiovas Disc. 2018; 1(1): 01-05.
43. Jesús Millán Núñez-Cortés, et al. Prescription Habits for Statins in Patients with Impaired Glucose Metabolism. Results of a program with Focus Groups to Assess the Selection Criteria. Am J of Card and Cardiovas Disc. 2019; 1(1): 01-04.
44. G D Kolovou, et al. Evaluation of Postprandial hyper

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triglyceridaemia in patients withTangier disease. Am J of Card and Cardiovas Disc. 2018; 1(1): 01-04.
45. Brian O rourke, et al. Determination of The Mitochondrial Redox Waves and Subcellular Metabolic Transients in Heart Cells. Am J of Card and Cardiovas Disc. 2018; 1(1): 01-04.
46. Shuixiang Yang, et al. Radiofrequency Ablation Treating Atrial Fibrillation Can Reverse the Changes of Mirnas Regulating Ion Channel Proteins. Am J of Card and Cardiovas Disc. 2018; 1(1): 01-08.
47. Hadi abdulsalam Abo Aljadayel, et al. Penetrating War Cardiac and Great Vessels Injury, Surgical Outcome Analysis in 24 Patients. Am J of Card and Cardiovas Disc. 2018; 1(2): 01-05.
48. Hatice Yorulmaz, et al. Assessment of the Death Anxiety and Death Depression Levels of Cardiac Patients. Am J of Card and Cardiovas Disc. 2019; 2(1): 01-06.
49. Camara Abdoulaye, et al. Cardiomyopathie Du Peripartum Compliquee D'accident Vasculaire Cerebral Cas D'une Guinéenne De 19ans : Cas Clinique. Am J of Card and Cardiovas Disc. 2019; (1): 01-03.
50. Sergio F. Estrada-Orihuela, et al. Lasalocid, Interrupts and Reverses, Within One Minute, The Myocardial Damage Caused By Coronary Anoxia Reperfusion in Rat Heart. Am J of Card and Cardiovas Disc. 2019; (1): 01-05.
51. Jesus Millan Nunez-Cortes, et al. Prescription Habits for Statins in Patients with Impaired Glucose Metabolism. Results of a program with Focus Groups to Assess the Selection Criteria. Am J of Card and Cardiovas Disc. 2019; 1(1): 01-06.
52. Federico Cacciapuoti, et al. The Dilemma of Diastolic Heart Failure. Am J of Card and Cardiovas Disc. 2019; 1(1): 01-03.
53. Elad Boaz, Bowel Ischemia and Vascular Air-Fluid Levels. Anna Cas Rep and Ima Surg. 2018; 1(1): 001-00.
54. Sinisa Franjic, et al. A Patient With A Maxillofacial Problem. Anna Cas Rep and Ima Surg. 2018; 1(1): 001-004.
55. Davidson W, et al. Case Presentation: Hantavirus pulmonary syndrome [HPS]. Anna Cas Rep and Ima Surg. 2018; 1(1): 001-005.
56. Farid ZM, et al. Uropathy Secondary Chronic obstructive to Ureter Inguinal Herniation. Anna Cas Rep and Ima Surg. 2018; 1(1): 001-002.
57. De Letter DJ, et al. Cornual Molar Ectopic Pregnancy Diagnosis and Treatment. Anna Cas Rep and Ima Surg. 2018; 1(1): 001-003.
58. Ameni Touati, et al. Silver Russell Syndrome: Case Reports from North Africa and Review on The Literature. Anna Cas Rep and Ima Surg. 2019; 1(1): 001- 004.
59. Kunst WM, et al. Case Reports and Review of Spontaneous Rupture of Hyperreactive Malarial Splenomegaly [HMS]. Anna Cas Rep and Ima Surg. 2018; 1(1): 001-005.
60. F Hanefeld, et al. A Review of The Literature an Emerging Community Pathogen methicillin-Resistant Staphylococcus. Anna Cas Rep and Ima Surg. 2018; 1(1): 001-0011.
61. Page W Caufield, et al. Evidence for a Discrete Window of Infectivity. Am J Den and Ora Car. 2018; 1(1): 001-006.
62. Robert T Dirksen, et al. Dihydropyridine Receptors and Ryanodine Receptors: Bi-Directional Coupling . Am J Den and Ora Car. 2018; 1(1): 001-009.
63. IJ Jacobs, et al. Cancer and Intraepithelial Neoplasia-Tissue-specific apoptotic effects of the p53 codon 72 polymorphism . Am J Den and Ora Car. 2018; 1(1): 001-003.
64. Iain L C Chapple, et al. Human Immunodeficiency Virus disease in oral health significances. Am J Den and Ora Car. 2018; 1(1): 001-007.
65. H Larjava, et al. Activity of αvβ6 Integrin in Oral Leukoplakia. Am J Den and Ora Car. 2018; 1(1): 001-005.
66. Siddharth Kothari, et al. Effectiveness of Counselling and Home Care Self-Management Strategies in Reducing Masticatory Muscle Pain: A Review. Am J Den and Ora Car. 2019; 2(1): 001-007.
67. Betania Maria Soares, et al. Use of Blue LED and Curcumin for Photosensitization of Candida Albicans. Am J Den and Ora Car. 2019; 2(1): 001-005.
68. Jing Guo, et al. Advances in Methods of Maxillary Transverse Expansion. Am J Den and Ora Car. 2019; 2(1): 01-05.
69. Dario C. Altieri, et al. Cell division by p34cdc2 phosphorylation of survivin- Regulation . Sci J of Der and Ven. 2018; 1(1): 001-005.
70. Axel Trautmann, et al. Eczematous dermatitis: T cell and keratinocyte apoptosis plays a key pathogenetic . Sci J of Der and Ven. 2018; 1(1): 001-007.
71. JD Fine, et al. Epidermolysis bullosa Cardiomyopathy in inherited . Sci J of Der and Ven. 2018; 1(1): 001-004.
72. NE Fusenig, et al. Human Skin Angiogenic Switch Occurs Squamous Cell Carcinomas . Sci J of Der and Ven. 2018; 1(1): 001-007.
73. Tapani Tuomi, et al. Water- Damaged Building and Mycotoxins in Crude Building Materials. Sci J of Der and Ven. 2018; 1(1): 001-005.
74. John S Davies, et al. The Use of Social Media among Doctors Under taking a Post-Graduate Endocrinology Diploma. Sci J Endo and Meta. 2018; 1(1): 001-004.
75. Juan J Gagliardino, et al. By Short-Term Dietary Manipulation: The Endocrine Pancreas Activity of Tyrosine Hydroxylase. Sci J Endo and Meta. 2018; 1(1): 001-005.
76. Colin A. Leech, et al. The Glucose Dependent in Pancreatic β-Cells : Voltage-Independent Calcium Channels Mediate Slow Oscillations of Cytosolic CalciumPancreatic β-Cells. Sci J Endo and Meta. 2018; 1(1): 001-009.
77. Colin A. Leech, et al. The Voltage-Independent Activation of Inward Membrane Currents and Elevation of Intracellular Calcium in HIT-T15 Insulinoma CellsPituitary Adenylate Cyclase-Activating Polypeptide Induces. Sci J Endo and Meta. 2018; 1(1): 001-008.
78. Suhail AR Doi, et al. Making Use Of Combined Criteria - Diagnostic Criteria For Diabetes. Sci J Endo and Meta. 2018; 1(1): 001-006.
79. Maria I Borelli, et al. Effect Of Endogenous Islet Catecholamines Possible Modulatory On Insulin Secretion. Sci J Endo and Meta. 2018; 1(1): 001-005.
80. Louis Irwin, et al. Effect of exercise in combination with dietary nopal and zucchini on chronic and acute glucohomeostasis in genetically obese mice. Inte J Expe Bio. 2018; 1(1): 001-005.
81. Vijaya Saradhi Settaluri, et al. Validation of Non Essential Amino Acids and Total Protein Content in Different Categories of Tea. Inte J Expe Bio. 2018; 1(1): 01-04.
82. Patrick D Craig, et al. T Antigen: Polyomavirus Middle of Natural Biology. Inte J Expe Bio. 2018; 1(1): 001-007.
83. Yoshinori Ohsumi, et al. The HIV Coreceptor CCR5 - Recycling and Endocytosis. Inte J Expe Bio. 2018; 1(1): 001-008.
84. Marino Zerial, et al. Elicitation of the Angiogenic Phenotype1: Transforming Myc Protein for In Vivo. Inte J Expe Bio. 2018; 1(1): 001-008.
85. Zhang Y, et al. Odorant Receptor In Mammali : The Caenorhabditis Elegans Seven-Transmembrane Protein ODR-10 Functions on Cells. Inte J Expe Bio. 2019; 1(1): 001-008.
86. Kazuo Maeda, et al. Improved Outcome with Novel Studies in Fetal Monitoring. Sci J of Gyne and Obste. 2019; 2(1): 001-004.
87. Sunil J. Wimalawansa, et al. Vitamin D Deficiency-Related Reproductive Consequences. Sci J of Gyne and Obste. 2019; 2(1): 001-006.
88. Munch A, et al.Investigation in blood Leukocytes and Neutrophils in Periparturient Dairy Cow. Sci J of Gas and Hepa. 2018; 1(1): 001-006.
89. Jie Song Hua, et al. Primary Helicobacter Pylori Resist

Cite this article: pcf3 - Survey of Specialists in Palliative Drugs and Symptom Relief in Palliative Care. Am J Pallia Med & Car. 2019; 1(1): 001-008.

ance to Clarithromycin and Metronidazole in Singapore. Sci J of Gas and Hepa. 2018; 1(1): 001-003.
90. Paul Moayyedi, et al. A Systematic Review and Economic Analysis: Proton Pump Inhibitors in Nonulcer Dyspepsia Efficacy. Sci J of Gas and Hepa. 2018; 1(1): 001-003.
91. Zhen-Ning Wang, et al.Gastric Cancer: Collagen IV Expression and Biological Behavior. Sci J of Gas and Hepa. 2018; 1(1): 001-002.
92. Zhen-Ning Wang, et al. A Possible Pathophysiologic Contribution to Necrotizing Enterocolitis: Human Intestine Inflammation. Sci J of Gas and Hepa. 2018; 1(1): 001-006.
93. Paul M Wassarman, et al. Egg Interaction during Mammalian Fertilization in the Molecular Basis of Sperm . Sci J of Gyne and Obste 2018; 1(1): 001-006.
94. Mary Lou Moore, et al. Breastfeeding Benefits Support -Research. Sci J of Gyne and Obste 2018; 1(1): 001-002.
95. Pepita Gimenez-Bonafe, et al. Preservation of Fertility in Patients with Cancer. Sci J of Gyne and Obste 2018; 1(2): 001-006.
96. Yueyang F Fei, et al. Non-Hemorrhagic Unilateral Adrenal Infarct In Pregnancy: A Case Report. Sci J of Gyne and Obste. 2019; 1(1): 001-002.
97. Karen Pierre, et al. Protein-Energy Adequacy of Dialysis Patients in Trinidad and Tobago. Am J of Nep and Ther. 2018; 1(1): 01-05.
98. Balakrishna N, Tenckhoff Catheter Surgical under Local Anesthesia. Am J of Nep and Ther. 2018; 1(1): 001-003.
99. J T Ohlsson, et al. Man in angiotensin and noradrenaline inhibits the Endothelin. Am J of Nep and Ther. 2018; 1(1): 001-005.
100. David J, et al. Apoptosis and Ischemic Renal Injury Reduce the Guanosine Supplementation. Am J of Nep and Ther. 2018; 1(1): 001-005.
101. R W Baldeweg, et al. Tumor-induced osteomalacia : Cloning and characterization of Fibroblast Growth Factor 23. Am J of Nep and Ther. 2018; 1(1): 001-006.
102. Amitabh Arya, et al. Post Pyeloplasty Follow Up In Children And Adolescents: Diuretic Renography Or Renal Ultrasonography? Am J of Nep and Ther. 2019; 2(1): 001-005.
103. Amitabh Arya, et al. Post Pyeloplasty Follow Up In Children And Adolescents: Diuretic Renography Or Renal Ultrasonography? Am J of Nep and Ther. 2019; 2(1): 001-005.
104. Richard Lechtenberg, et al. Tau Interferon in Multiple Sclerosis. Amer J Neur & Neurophysi. 2018; 1(1): 001-002.
105. Eva Guy Rodriguez, et al. Discussion of the differential diagnosis of bilateral thalamic lesions-Bilateral thalamic infarcts due to occlusion of the Artery of Percheron. Amer J Neur & Neurophysi. 2018; 1(1): 001-004.
106. Yhashi Chang, et al. IVIg for Miller Fisher syndrome: Cerebral infarction. Amer J Neur & Neurophysi. 2018; 1(1): 001-002.
107. Fredrick J. Seil, et al. T cell responses to Myelin Antigens and Antimyelin Antibodies. Amer J Neur & Neurophysi. 2018; 1(1): 001-005.
108. Y Niimi, et al. Embolization of Spinal Cord AVMs: Neurophysiologic Provocative Testing. Amer J Neur & Neurophysi. 2018; 1(1): 001-002.
109. Ameni Touati, et al. Some Reducibility Results for Differentiable Sets. Amer J Neur & Neurophysi. 2019; 1(1): 001-005.
110. Chrisostomos Sofoudis, et al. Sofoudis C. Septic Abortion Accompanied with Dessiminated Intravascular Coagulation and Acute Cardiomyopathy Presentation of a Rare Case and Mini Review. Am J Nur & Pract. 2018;1(1): 001-00.
111. Nick Jones, et al. Nurse Practitioners and Family Physicians Ethics Health Care Services. Am J Nur & Pract. 2018; 1(1): 001-005.
112. Thomas R A, et al. Human Infants Learning by Prenatal and Postnatal Flavor . Am J Nur & Pract. 2018; 1(1): 001- 006.
113. D. J Wise, et al. A Randomized, Double-Blind, Placebo-Controlled - Milk Production in Mothers of PremaTure Newborns Domperidone Drug effect. Am J Nur & Pract. 2018; 1(1): 001-005.
114. Bronagh Bufton, et al. Effects of Nursing Homes Ownership Compromise the Quality of Care. Am J Nur & Pract. 2018; 1(1): 001-005.
115. Kerstin Ekberg, et al. How Physicians Deal With the Task of Sickness Certification in Cause-Based and Comprehensive Disability Systems – A Scoping Review. Am J Nur & Pract. 2019; 2(1): 01-10.
116. Michael J. Vives, et al. Factors in Choosing the Surgical Approach: Cervical Spondylotic Myelopathy. Am J Orth and Rhe. 2018; 1(1): 001-004.
117. M. Runge, et al. Geriatric Patients in Balance Training and Exercise. Am J Orth and Rhe. 2018; 1(1): 001-003.
118. Ukoha Ukoha Ukoha, et al. Nutrient Foramina in Long Bones : Study. Am J Orth and Rhe. 2018; 1(1): 001-003.
119. Zhiquan An, et al. Human Humeral Diaphysis of the Nutrient Foramina : Anatomical Study : Study. Am J Orth and Rhe. 2018; 1(1): 001-007.
120. K-P Günther, et al. Hip Replacement in Rates: International Variation: Study. Am J Orth and Rhe. 2018; 1(1): 001-005.
121. Saeed Taj din, et al. Level of Physical Activity among Diabetic Patients of Rural and Urban Areas. Am J Orth and Rhe. 2019; 2(1): 001-004.
122. Carolina Caleza Jiménez, et al. Breastfeeding, Bed-Sharing and Early Childhood Caries. Is There An Association? A Review of the Literature. Am J Pedi and Heal care. 2018; 1(1): 001-004.
123. Katarzyna Niewiadomska-Jarosik, et al. Lipid Profile in Children Born As Small for Gestational Age . Am J Pedi and Heal care 2018; 2(1): 01-03.
124. Mustafa Aydin, et al. Antibiotic Susceptibility Pattern and Clinical Features of Klebsiella Sepsis in Newborn Infants. Am J Pedi and Heal care 2019; 1(1): 01-04.
125. H Dele Davies, et al. Necrotizing Fasciitis- Flesh-Eating Bacteria Disease. Am J Pedi and Heal care 2019; 1(1): 01-06.
126. Marie Westwood, et al. The diagnosis of urinary tract infection (UTI) in children under five years: Rapid tests and urine sampling techniques. Am J Pedi and Heal care 2019; 1(1): 01-09.
127. Folkert Fehr, et al. What Entrustable Professional Activities Add To a Primary Care Residency Curriculum. Am J Pedi and Heal care 2019; 2(1): 01-06.
128. Sonya Martin, et al. Spatially Modulated Illumination Microscopy□D measures the size of Biological Nanostructures . Ann of Phar Nano Tech and Nanomedi. 2018; 1(1): 01-05.
129. Sonya Martin, et al. Genetic analysis of Fis interactions with their binding sites. Ann of Phar Nano Tech and Nanomedi. 2018; 1(1): 01-07.
130. John H Reif, et al. Nucleation assembly of DNA tile complexes is directed by barcode-patterned lattices. Ann of Phar Nano Tech and Nanomedi. 2018; 1(1): 01-07.
131. Thomas H LaBean, et al. Self assembly of DNA nanotubes from triple-crossover tiles as templates for conductive nanowires. Ann of Phar Nano Tech and Nanomedi. 2018; 1(1): 01-05.
132. Ulrich Kettling, et al. Dual-Photon Fluorescence Coincidence Analysis: Rapid quantification of Enzyme activity. Ann of Phar Nano Tech and Nanomedi. 2018; 1(1): 01-05.
133. Ahmed R. Gardouh, et al. Design, Optimization and In-Vitro Evaluation of Antifungal Activity of Nanostructured Lipid Carriers of Tolnaftate Ann of Phar Nano Tech and Nanomedi. 2019; 2(1): 01-05.
134. Mohammed Khalid, et al. Khalid M. Predictors of Prognosis in Pulmonary Hypertension. Anna Pul and Crit Car Med.

Cite this article: pcf3 - Survey of Specialists in Palliative Drugs and Symptom Relief in Palliative Care. Am J Pallia Med & Car. 2019; 1(1): 001-008.

2018; 1(1): 001-004.
135. Abdullah Alsaeedi, et al. The Prevalence of Smoking among sample of Kuwait Asthmatics and its impact on the response of the treatment, Anna Pul and Crit Car Med. 2018; 1(2): 001-002.
136. Nicolau Beckmann, et al. Resolving the Oedematous Signals Induced by OVA Challenge in the Lungs of Actively Sensitised Rats. Anna Pul and Crit Car Med.. 2018; 1(1): 01-06.
137. Thomas J walsh, et al. Investigate the performance of non-invasive diagnostic tests such as galactomannan enzyme immunoassay and quantitative Caspofungin in the early diagnosis of invasive aspergillosis (IA). Anna Pul and Crit Car Med.. 2018; 1(1): 01-06.
138. Charles B. Huddleston, et al. Lung Transplantation in pediatrics. Anna Pul and Crit Car Med.. 2018; 1(1): 01-05.
139. Jeffrey P. Lamont, et al. Comparision of valved vs non-valved implantable ports for vascular access:A randomized trial. Anna Pul and Crit Car Med.. 2018; 1(1): 01-03.
140. D Inwald, et al. Risk and relevance of open lung biopsy in Nonneonatal extracorporeal membrane oxygenation (ECMO) patients. Anna Pul and Crit Car Med.. 2018; 1(1): 01-04.
141. Guillaume Mortamet, et al. Does Esophageal Pressure Monitoring Reliably Permit To Estimate Trans pulmonary Pressure In Children?. Anna Pul and Crit Car Med.. 2018; 2(2): 01-05.
142. Yang Jin, et al. Extracellular Vesicle-Shuttling MicroRNAs Regulate the Development of Inflammatory Lung Responses. Anna Pul and Crit Car Med.. 2018; 1(2): 01-04.
143. Nicola Clemente, et al. Pneumonectomy As A Salvage Therapy: A Rare Indication For A Gastric Malt Lymphoma Disseminated To The Lung. Anna Pul and Crit Car Med.. 2018; 1(2): 01-04.
144. Nicola Clemente, et al. Pneumonectomy As A Salvage Therapy: A Rare Indication For A Gastric Malt Lymphoma Disseminated To The Lung. Anna Pul and Crit Car Med.. 2018; 1(2): 01-04.
145. Victor Chew, et al. Pulmonary Cement Embolism. Anna Pul and Crit Car Med. 2019; 2(1): 01-02.
146. Victor Chew, et al. An Unusual Cause of a Tension Pneumothorax. Anna Pul and Crit Car Med. 2019; 2(1): 01-03.
147. Mark C. Lavigne, et al. A Performance Summary of Agents Used in Oral Care for Non-Ventilated and Mechanically-Ventilated Patients. Anna Pul and Crit Car Med. 2019; 2(2): 01-34.
148. Elisangela Hermes, et al. Psychomotricity in Vestibular Dysfunction Therapy (VDT): A Collective Health Question. Am J Rhin and Otolo. 2018; 1(1): 001- 005.
149. Ramtej J Verma, et al. Diethanolamine-Induced Hepatic Injury and Its Amelioration by Curcumin. Am J Toxi and Res. 2018; 1(1): 001-004.
150. Chee Kong Yap, et al. A Preliminary Screening of Cd and Pb Concentrations in the Some Traditional Chinese Herbal Medicines Bought From Selected Shops in Peninsular Malaysia. Am J Toxi & Res. 2018; 1(1): 001-004.
151. Geza Bozoky, et al. Acute Silent Non-Massive (submassive) Pulmonary Embolism. Am J Ang and Surg . 2018; 1(1): 001-003.
152. Muhammad Imran Qadir, et al. Is Hunting Lovering Associates with Pulse Rate. Am J of Viro and Dis. 2019; 1(1): 01.
153. Mujahid Rasheed, et al. Relation of Blood Group with Motion Sickness. Am J of Viro and Dis. 2019; 1(1): 02.
154. Mujahid Rasheed, et al. Views of University Paramedical Students about Causes of Pharyngitis, Its Transmission and Medicinal Control. Am J of Viro and Dis. 2019; 1(1): 02.
155. Kainat Rafaqat, et al. Views of University Paramedical Students about Causes of Pharyngitis, Its Transmission and Medicinal Control. Am J of Viro and Dis. 2019; 1(1): 02.
156. Sajid Ullah, et al. HCV Prevalence in the Volunteer Blood Donors in District Bajaur Khyber Pakhtunkhwa Pakistan. Am J of Viro and Dis. 2019; 1(1): 02.
157. Rabbia Aslam, Analogue of Breathing With Lizard Fright Am J of Viro and Dis. 2019; 1(1): 01.
158. Hurain Shaukat, et al. Linkage of Body Temperature with Exercise Am J of Viro and Dis. 2019; 1(1): 01.
159. Mariyam Javed, et al. How Breathe Rate Relates With Cricket Likeness? Am J of Viro and Dis. 2019; 1(1): 02.
160. Hakan Alfredson, et al. Achilles and patellar tendon operations performed in local anestesia, Am J Anest and Pai med. 2018; 1(1): 001-002.
161. Richard Lechtenberg, et al. Tau Interferon in Multiple Sclerosis. Amer J Neur & Neurophysi. 2018; 1(1): 001-002.

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